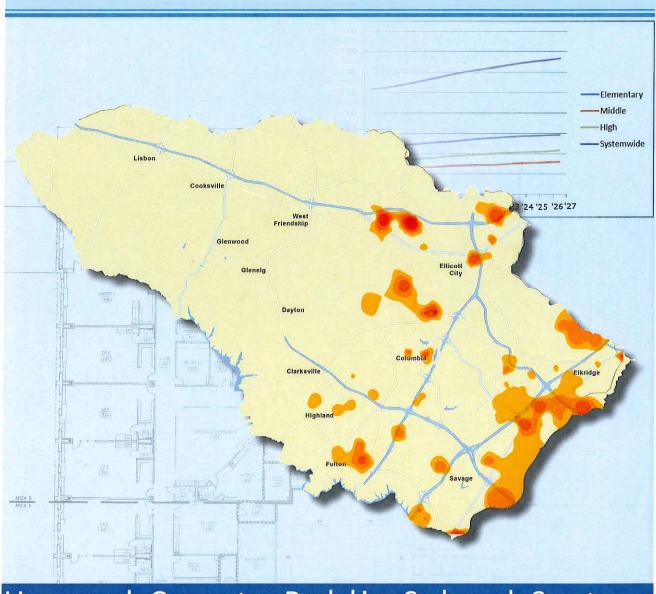
# 2015 Feasibility Study

An Annual Review of Long-Term Capital Planning and Redistricting Options



Howard County Public School System

# Feasibility Study: An Annual Review of Long-Term Capital Planning and Redistricting Options

# Superintendent

Renee A. Foose, Ed.D.

# **Board of Education**

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Janet Siddiqui, M.D., Chairman Ann De Lacy, Vice Chairman Bess Altwerger, Ed.D. Sandra H. French Ellen Flynn Giles Christine E. O'Connor Cynthia L. Vaillancourt

Student Member Patrick B. Mikulis

# Feasibility Study An Annual Review of Long-Term Capital Planning and Redistricting Options

Prepared By:
Office of School Planning
10910 Clarksville Pike
Ellicott City, Maryland 21042
410-313-6600

Camille Jones
Chief Operating Officer

Bruce Gist
Executive Director
Facilities, Planning, and Management

Joel A. Gallihue, AICP
Manager of School Planning

Tim Rogers
Planning Analyst

Jennifer Bubenko Planning Specialist

This document is prepared in cooperation with the Office of Budget and Finance as pre-planning for the FY 2017 Capital Budget.

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# Board of Education Howard County Public School System

10910 Clarksville Pike Ellicott City, Maryland 21042 Phone: 410-313-7194 - Fax: 410-313-6833 Group Board Member email: boe@hcpss.org



410-313-7194

janet\_siddiqui@hcpss.org

Term Expires 2016



301-922-4609
ann\_delacy@hcpss.org
Term Expires 2016



Member

410-740-7195
bess\_altwerger@hcpss.org
Term Expires 2018



410-531-2394
sandra\_french@hcpss.org
Term Expires 2018



443-535-9086
ellen\_giles@hcpss.org
Term Expires 2016



443-620-0122
christine\_oconnor@hcpss.org
Term Expires 2018



443-996-7751

cynthia\_vailliancourt@hcpss.org

Term Expires 2018



student\_member@hcpss.org
Term 2014-2015

### Renee A. Foose, Ed.D.

Superintendent Email: superintendent@hcpss.org

### Linda T. Wise

Deputy Superintendent linda\_wise@hcpss.org

### Camille B. Jones

Chief Operating Officer camille jones@hcpss.org

### **Bruce Gist**

Executive Director
Facilities, Planning, and Management
bruce\_gist@hcpss.org

### Frank Eastham

Executive Director
School Improvement and Administration
frank eastham@hcpss.org

### Rebecca Amani-Dove

Director Communications rdove@hcpss.org

### Beverly J. Davis

Executive Director
Budget and Finance
beverly\_davis@hcpss.org

### E. Grace Chesney

Chief Accountability Officer echesney@hcpss.org

### Susan C. Mascaro

Chief of Staff sue\_mascaro@hcpss.org

### **Patricia Daley**

Executive Director
Special Education and Student Services
patricia\_daley@hcpss.org

### **Clarissa Evans**

Executive Director
School Improvement and
Curricular Programs
clarissa\_evans@hcpss.org

### Juliann Dibble

Director
Professional and Organizational
Development
juliann\_dibble@hcpss.org

# Feasibility Study An Annual Review of Long-Term Capital Planning and Redistricting Options

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Feasibility Study
An Annual Review of Long-Term Capital
Planning and Redistricting Options

# Introduction

### Introduction

Each year the Board of Education (Board) of the Howard County Public School System (HCPSS) reviews capital planning options and redistricting scenarios through a feasibility study. The report has four goals:

- 1. Inform the long term planning process.
- 2. Facilitate discussion of decisions that may lay ahead.
- 3. Provide strategic information to the school system.
- 4. Prepare for scheduled redistricting.

The annual student enrollment projection is introduced in this report along with scenarios that are intended to provide a comprehensive look at suggested capital additions, renovations, and any attendance area adjustments that are anticipated within the ten-year Capital Improvement Program period. Plans examined in this document may only be implemented through the Board of Education's approval of both the capital budget and any change to current school attendance areas. This report is the starting point for the annual process of developing the capital budget.

Experience has shown that by presenting this report annually, assumptions and trends can be given consideration on a regular basis and appropriate adjustments can be made to the capital budget or redistricting plans. New plans may be needed to react to population shifts or new residential development plans. This document makes note of scenarios that may be developed in future attendance area review processes. Full plan assessments will then be made in a future report prior to Board deliberation to show how those plans conform to Board policy.

Annual enrollment projections are used in short-term decision making, such as determining staffing and supplying schools. The allocation of relocatable classrooms is also made using projections. The projection is presented in a format similar to the Adequate Public Facilities Ordinance (APFO) chart. The "pre-measures" chart shows the effect of projected enrollment with capacity projects included in the Board approved FY 2016 Capital Budget. The "post-measures" chart gives a preliminary view of projected enrollment with new or accelerated capital projects recommended in this report.

Projects in the Capital Improvement Program that increase student capacity will be tested in the feasibility study with a redistricting plan consistent with Board policy on redistricting policy goals. Plans will be linked within and across organizational levels to form a short- and long-range redistricting plan. The Board of Education will review the plan and set direction. In years when redistricting is anticipated, the Attendance Area Committee will evaluate the plan, providing review and comment to the Superintendent. At this time redistricting is not recommended until 2017 and will include the opening of New Elementary School #42 (ES #42).

The Office of School Planning maintains a portion of the HCPSS website with information relevant to the process. During redistricting the <u>School Planning page</u> is frequently updated with maps, reports, and meeting minutes.

# Feasibility Study

An Annual Review of Long-Term Capital Planning and Redistricting Options

# **Executive Summary**

### **Executive Summary**

This feasibility study is an annual presentation containing reports of projected enrollment and feasible redistricting in compliance with Policy 6010 - School Attendance Areas. Since new capacity, either as additions or new facilities, factors into these considerations, this document forms the basis for the development of the Capital Improvement Program (CIP). The following sections highlight continuing considerations included in this study. In September 2015, the FY 2017 Superintendent's Proposed Capital Budget will be presented, which includes the five-year CIP. The additions and new schools approved as part of the FY 2016–2025 Long-Range Master Plan are included in the assumptions for this document.

Since the 2014 Feasibility Study was presented, constraints to local capital funding have appeared. These come despite recently approved general plan amendments and strong enrollment growth. Responding to these constraints requires adjustment to the long-range plan and perhaps redistricting. Every effort was made during the budget process to preserve existing capacity projects. This document provides some adjustments and interim measures.

The replacement of Wilde Lake MS is critical to help manage growth in student enrollment stemming from the Columbia Town Center development. The Swansfield ES addition also serves Downtown Columbia growth since feasible redistricting including Swansfield and Bryant Woods ES can relieve Running Brook ES. ES #42 is a high priority need to address future growth in both the Northeastern and the Southeastern Regions, and was approved for acceleration. Steady enrollment growth in the area has validated a recommendation to open this facility in 2018. The Board decided last March to permit the modification of the CIP to allow for an August 2018 opening of ES #42 and designated a site adjacent to Thomas Viaduct MS for this school. The Board also approved use of the 788 seat elementary school prototype. These approvals are incorporated in this document.

### Recommendations:

- 1. Preserve funding to open Swansfield ES addition. With feasible redistricting, this capacity can help defer the opening of a new elementary school most likely at the Faulkner Ridge site.
- 2. Preserve funding to open Waverly ES addition but consider options to better use West Friendship ES and western capacity, perhaps with some interim capital investment, to help defer a new elementary school in the vicinity.
- 3. Consider alternative delivery of regional programs to open capacity at existing schools.
- 4. Consider redistricting at multiple levels in the same year to better align feeds.

# Feasibility Study

An Annual Review of Long-Term Capital Planning and Redistricting Options

# Planning Considerations

This section identifies planning assumptions and considerations. The annual projection is developed with assumptions about enrollment growth that have evolved over the years. Other planning considerations involve implications for capital facilities. Some of the previous planning assumptions have been adjusted, while others have been added for this study. This section presents a discussion of the major components and adjustments included in this year's planning considerations.

# **Policy Guidance**

This document is guided by Board of Education Policy 6010. Projects in the Capital Improvement Program that increase student capacity will be tested in the feasibility study with a redistricting plan consistent with stated redistricting policy goals. Plans will be linked within and across organizational levels to form a short- and long-range redistricting plan. The Board of Education will review the plan and set direction, as appropriate, during the capital budget presentations each year. Policy 6010 recommends consideration of redistricting under certain conditions such as the opening of a school or adjusting to some other change. When school capacity utilization projections fall outside the target capacity utilization range of 90–110 percent over a period of time, redistricting may be considered.

Redistricting is not planned until 2017. When redistricting is planned, staff will refine the goal-directed short- and long-range plan in the Feasibility Study based on the most current set of projections that conform to System-Level Process Requirements. The Superintendent will appoint an Attendance Area Committee to test alternate scenarios consistent with the direction set by the Board of Education and the standards and factors in Policy 6010. Plans may be presented in regional meetings, and various methods will be used to collect additional input from the public. A Superintendent's plan that takes into account previous staff, committee, and community input is presented to the Board.

Figure 3.1

### Policy 6010 - School Attendance Areas - identifies eleven redistricting factors for consideration

- Educational welfare of the impacted students in both the sending and receiving schools
- 2. Frequency with which students are redistricted
- 3. Impact on the number of students bused and the distance bused-students travel
- 4. Cost
- 5. The demographic makeup and academic performance of students in both the sending and receiving schools
- 6. Number of students to be redistricted
- 7. Maintenance of feeder patterns
- 8. Changes in a school's program capacity
- 9. Impact on specialized or regional programs
- 10. Functional and operational capacity of school infrastructures
- 11. Building utilization (90–110 percent where possible)

The Board of Education evaluates the Superintendent's plan according to the standards of Policy 6010 which are listed above in Figure 3.1. In their deliberations they may consider new scenarios using these considerations. It is unlikely that one plan can fully satisfy all considerations. Capacity utilization over time and the number of students redistricted are considerations often given the most attention. The other factors are emphasized to different degrees, but all are given consideration. The distribution of enrollment growth and capacity is never perfect, so it can be difficult to make plans that satisfy all factors and move few students. Some are dissatisfied with the outcome, but most feedback affirms the process laid out in Policy 6010 as being transparent. Once a decision is made, a robust transition process is undertaken to facilitate students' adjustment to new school assignments.

# Alignment with Strategic Plan

Vision 2018: Fulfilling the Promise of Preparation is the Board's strategic plan to build an educational program that is among the best in the world. The feasibility study supports achievement of each goal in Vision 2018.

The anticipation of growth trends and planning for adequate permanent or temporary space is needed to serve student needs. When attendance area changes are necessary, a student-centered transition process is provided to welcome the students to the new school. These efforts are made to ensure every student achieves academic excellence in an inspiring, engaging, and supportive environment.



Input session for middle school redistricting

Crucial decisions about budget and attending areas must be the result of an open process that includes many of the stakeholders. Board of Education decisions need to be informed by both the technical guidance of staff, and the concerns and desires of the families and community. For this reason, the Office of School Planning maintains an extensive web presence and supports many meetings of committees, PTAs, and other community groups. It is also necessary that the office serves as a liaison to various county and state agencies to communicate agency direction. These efforts ensure that families and the community are engaged and supported as partners in education.

### Table 3.1 | Strategic Plan Strategies Relevant to Feasibility Study

- 1.4.6 Configure physical spaces to facilitate learning.
- 2.1.2, 3.1.3, 4.62 Consistently include representatives from stakeholder groups in planning processes to inform school system actions and decisions.
- 2.1.6 Provide timely, relevant, and easily accessible information.
- 3.3.2 Tailor communications to user needs.
- 4.4.1 Utilize technology tools that are intuitive, efficient, effective across platforms, and requirements-driven in a standardized environment.
- 4.4.2 Streamline and automate organizational processes in alignment with industry best practices.
- 4.5.1 Refine central services to streamline operations, optimize efficiency and effectiveness, and facilitate collaboration.
- 4.5.2, 4.6.4 Utilize consistent performance management practices to plan, evaluate, and refine initiatives.
- 4.5.3 Implement continuous improvement practices, including quality control and process management, in every school and division.
- 4.6.1 Regularly consider research-based best practices.
- 4.6.3 Routinely benchmark with comparison organizations to analyze current practices and identify best practices.

# Relationship to Capital Budget

County Council Review

Open Closed Chart

Enrollment January Projection Feasibility June Study Redistricting Yes Redistricting? Goals July No Attendance Staff Develops Area Review Capital Budget BOE Review Capital Budget Approved No Monitor for future Redistricting November Redistricting projections January Board of Education Yes Review Circular, Maps,

School Locator

BOE Process Assessment

Figure 3.2 Capital Budget and Redistricting Flow Chart

Figure 3.2 shows the redistricting process in the context of the capital budget. The Feasibility Study is presented as the capital budget is being prepared. The graphic shows that while redistricting may not take place annually, it is given consideration annually in the feasibility study.

There are a number of ways to address enrollment growth. In some cases, new capacity or a capital project is the best solution. In other cases, a redistricting consistent with policy may allow better use of existing capacity. Sometimes a change to regional program location can open capacity. Relocatable buildings can also be used to relieve overcrowding. The process is ongoing but may be tracked through this document and the capital budget process.

April

July Year Two

# Relationship to Capital Budget

The annual capital budget contains a capital improvement plan (CIP) and long-range master plan. Table 3.2 is a copy of the long-range master plan from the FY 2016 Board Requested Capital Budget. (The CIP is the first five years.) Capital projects are shown with anticipated funding phased out over future fiscal years. The feasibility study evaluates enrollment trends and discusses adjustments and changes that may be reflected in the CIP and Long Range Master Plan.

**Table 3.2 Example of Long Range Master Plan** 

	FY	2016-	2025	Long	j-Ran	ge M	aster	Plan				
ard of Education Approved (in Thousands)												
Project	Approved Appropriations	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total Approp. plus FY16-FY29 Request
Wilde Lake MS Replacement School	10.858	18,234	12,895							-		41,987
Patuxent Valley MS Renovation	8.145	10,000	10,385								_	28.530
Swansfield ES Renovation/Addition	1.898	9.875	11,567	1.751						-	-	25.091
Vaverty ES Renovation/Phase II Addition		3,770	6,430	16,898			- 4	1			12	27.098
New Elementary School #42	-	2,807	11,640	23,633	2,460		-		-	-	-	40,540
Oakland Mills MS Limited Renovation	-	-	4,000	5,000	5,000	-		190		-		14,000
lammond HS Renovation	3/4		3,790	18,124	18,999	18,374	19,000		_ 2	12	1.0	78,287
llicott Mills MS Addition	-	-	432	3,440	2,293		-			-	-	6,165
Oakland Mills HS Renovation				100	10	6,167	38,685	25,790	-	- 4		70,642
lew Elementary School #43			19		- 4	4,180	14,300	14,300	11,518			44,298
Centennial HS Renovation					-	-	-	6,151	38,592	25,728		70,471
lew Elementary School #44	12		-	-	_	- 2	1/2	4,320	15,670	15,670	11,334	46,994
lew Elementary School #45						- 1		-	4,460	16,330	16,330	
lew High School #13	I III.	والمحالية					-		_	10,764	51,226	
lew Middle School #21					-		-	-	-	-	4,880	4,880
ystemic Renovations/Modernizations	218,887	9,263	18,708	59,909	88,114	78,338	52,135	61,293	64,358	67,576	70,955	789,536
Roofing Projects	40,537	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	90,537
Playground Equipment	2,380	And a	300	300	300	300	300	300	300	300	300	5,080
elocatable Classrooms	16,210	1,200	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	30,910
ite Acquisition & Construction Reserve	20,836		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	38,836
echnology	29,486	5,000	10,000	6,000	5,000	7,500	10,000	5,000	7,500	10,000	6,000	101,486
chool Parking Lot Expansions	4,200		600	600	600	600	600	600	600	600	600	9,600
anning and Design	-	300	300	300	300	300	300	300	300	300	300	3,000
arrier Free	5,228	200	200	200	200	200	200	200	200	200	200	7,228
tate Allocations for Prior Year Projects*	÷ 250 00E	1,821	e 00 747	\$ 144 SEE	£ 424 760	\$ 404 AFO	\$144,020	\$126,754	\$151,99B	£455.000	£ 470 goz	1,821 \$ 1,676,127
TOTALS	\$ 358,665	\$ 67,470	\$ 99,747	₹144,000	<b>\$131,766</b>	₹ 124,409	₹144,020	₹120,704	₹101,998	\$155,968	₹1/U,025	₹ 1,6/6,12/

Ten-Year Long-Range Master Plan = \$1,317,462

# **Enrollment Projections**

Projections used for this study were generated in the spring of 2015. The projection methodology used by the HCPSS is based on historic cohort survival ratios—the number of students in a "cohort" that "survive" from one grade level to the next. In Figure 3.3, a cohortsurvival ratio is calculated from historic data. The rate of 1.15 can be used to predict how many second graders will result from the previous year's first graders. Ratios from multiple years and all grade transitions are calculated for each school. Other effects, such as housing yields and apartment turnover, are added to the projection. These variables are combined to project enrollment for each school for September 30 of each future year.

Figure 3.3 Years ----> 2 5 6 Grade 175 186 77 1 114 170 204 115 175 127 130 201 116 148 131 208 124 141 162 144 155 132 133 153 173 1.08 1.21 1.15 1.22 1.10 Survival Ratio

The projection is presented out to 2025 in this document. Certain decisions, such as site acquisition are appropriately informed by the latter part of the projection. Planning issues may become apparent by comparing the current projection to those made in previous years. The following charts use a ten-year series and present three consecutive annual projections.

As shown in Figure 3.4, the 2015 projection is initially showing a more modest rate of enrollment growth at the elementary level than the 2014 projection. The trend in the 2015 projection is for elementary enrollment to increase by 4,426 students by 2024. As a result of this enrollment growth, the capacity utilization of all elementary schools combined will begin to exceed 110 percent by 2021. Projects approved as part of the FY 2016 CIP can absorb most of this growth.

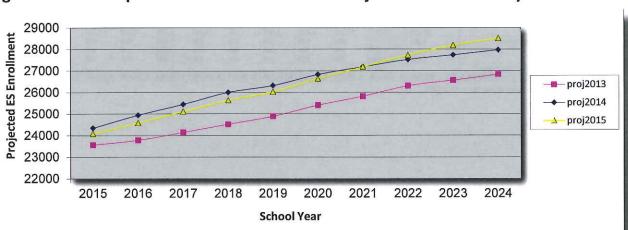


Figure 3.4 Comparison of Three Enrollment Projections - Elementary

# **Enrollment Projections**

Figure 3.4 shows that the trend in the 2015 projection is for middle school enrollment to increase by 2,493 students by 2024. The 2015 middle school growth rate is also lower than 2014. As a result of this enrollment growth, the capacity utilization of all middle schools combined will begin to exceed 110 percent beyond 2024. Most of the projected growth is in the east, and projects approved as part of the FY 2016 CIP can only partially absorb this growth.

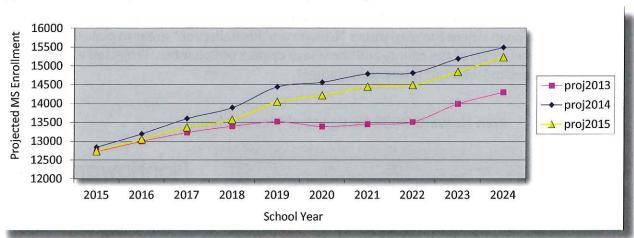


Figure 3.5 Comparison of Three Enrollment Projections - Middle

Figure 3.6 shows that the trend in the 2015 projection is for high school enrollment to increase by 4,028 students by 2024. While a lower trend than in the 2014 projection, the capacity utilization of all high schools combined will begin to exceed 110 percent by 2020. Based on the long-term growth trends, land should be banked for future high school needs in the eastern part of the county.

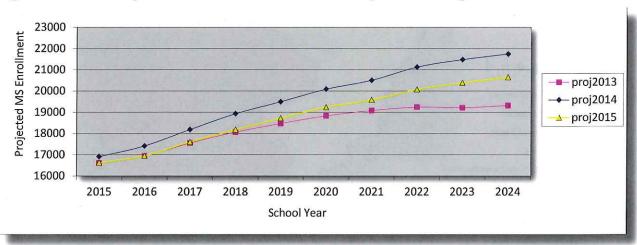


Figure 3.6 Comparison of Three Enrollment Projections - High

### Land Use

Development is guided by the general plan and implemented with zoning. "PlanHoward 2030," the Howard County General Plan, sets priorities for growth and was adopted by the County Council in July 2012. Comprehensive zoning took effect in October 2013. As a result, new development is expected that will affect future school planning. These changes were not anticipated in the projections used for the redistricting to open Ducketts Lane ES. Land use changes are captured in the annual projection to facilitate analysis of options in this document and the capital budget.

The General Plan included the adoption of a designated places map. Figure 3.7 depicts the Designated Places map and is taken from the plan. Most future development, and anticipated school needs, are planned where the map shows "Growth and Revitalization" areas in pink. Generally these are in the eastern part of the county and the village centers of Columbia. Projected enrollment growth is associated with this future development.

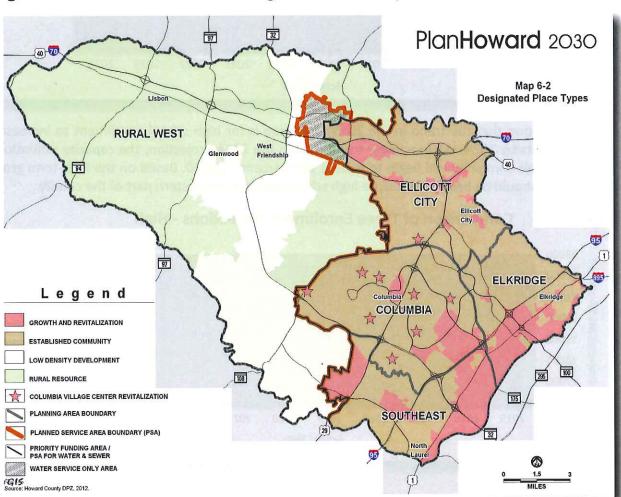


Figure 3.7 Plan Howard 2030 Designated Places Map

### Land Use

The FY 2016 Long-Range Master Plan proposed three additional elementary schools and one middle school in a plan that already included one future elementary school and one high school. Despite projections indicating these six new schools are needed, there are indications that capital funding will be constrained in the next few years.

The timing of residential development depends upon actual land development applications which can change. Projections are adjusted each year to account for phasing. The Department of Planning and Zoning provides the Office of School Planning with the amount of existing and projected housing units in the county by school planning unit. Future housing is calculated using a software tool that simulates the residential build-out of the County's remaining undeveloped residentially-zoned properties under real world conditions, such as the constraints imposed by current zoning of properties, the logistics of residential construction, and the growth limits of the County's General Plan. The output from this simulation informs the enrollment projection.

Figure 3.8 Recent development



Oxford Square construction.

Verde apartments at Howard Square.



Maple Lawn section shown in 2013 left and 2015 on the right.

### Capacities

Equitable evaluation of the impact of projected enrollment growth requires calculation of the capacities of schools. Capacities are not necessarily fixed to the capacity designed when a building first opened. Changes in use, program, and standards can effectively change capacity. Capacity methodologies have been reviewed at all three levels in recent years. This document expresses the projected enrollment by level and by school as a function of capacity utilization. Capacity utilization is the percentage of the building that will be utilized by the actual or projected enrollment. In the Pre- and Post- Measure Charts starting on page 45, the effect of considered plans on capacity utilization are depicted in tabular form.

The example below from the 2014 Feasibility Study, illustrates how capacity is shown in these charts. Figure 3.9 shows the effect of the larger capacity of the Wilde Lake MS replacement school. The capacity columns show the number of seats, which changes from 467 to 701 in 2017 when the replacement school opens. The corresponding calculation of the percentage utilization also changes, dropping from 122.7 percent to 95.6 percent in 2017. (Wilde Lake MS capacity was subsequently updated to a capacity of 760 in the FY 2016 Capital Budget .)

Figure 3.9 Capacity Chart Example

Post-Measures														
Aggregate Plan														
Chart reflects May 2014	Projec	tions, E	Board of	Educ atio	on's FY	2016 R	equested	c ap	acities	and estir	nate	d redist	ric ting.	
			Cap	acity		2	015-16		2	016-17		20	017-18	
Columbia - East		2015	2016	2017	2018	Proj	% Util.		Proj	% Util.		Proj	% Util.	Г
Lake Elkhom MS		643	643	643	643	554	86.2		563	87.6		604	93.9	
Oakland Mills MS		506	506	506	506	486	96.0		484	95.7		486	96.0	
Region MS Totals		1149	1149	1149	1149	1040	90.5		1047	91.1		1090	94.9	_
Columbia - West														T
Harpers Choice MS		506	506	506	506	559	110.5		574	113.4		598	118.2	C
Wilde Lake MS	R	467	467	701	701	573	122.7	C	599	128.3	C	670	95.6	
D1 550 T-4-1-		070	A-0	7700-	4007	1100	2100	-	1170	1000	-	1000		J.

High school program capacities are a product of either 80 or 85 percent of the total number of teaching stations multiplied by 25 students, exclusive of special education classrooms, and factored with consideration that not all teaching stations can be scheduled for use every period of the school day. Further, special-use teaching stations may not be adaptable for academic programs even if the space is available for a period of the school day.

Middle school program capacities are a product of 95 percent of the total number of teaching stations multiplied by 20.5 students, exclusive of special education classrooms. Like high schools, not all teaching stations can be scheduled for use every period of the school day.

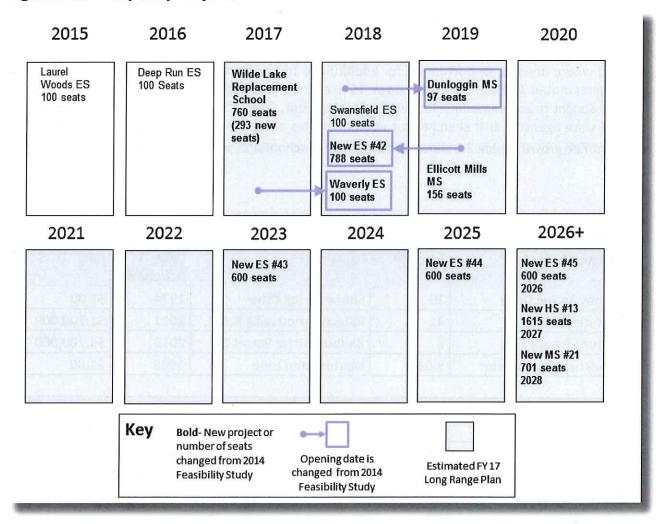
Elementary school program capacities are based on 22 students for each Kindergarten classroom, 19 students for each classroom in Grades 1 and 2, and 25 students for each classroom in Grades 3–5. Elementary school special education classroom capacities are established by the mandated student/teacher ratios for the various programs. Not included in the capacities for elementary schools are resource/instructional spaces that are utilized on a schoolwide basis where no one group of students

# Capacities

is assigned exclusively. Some examples of spaces not included in the capacity are gymnasiums, cafetoriums, art rooms, music rooms, media centers, gifted and talented rooms, or rooms dedicated to regional programs such as Regional Early Childhood Centers or Pre-K.

The FY 2017 Capital Budget will include updates to the Long Range Plan. Figure 3.10 below shows potential changes to the Long Range Plan considered in this document.

Figure 3.10 Capacity Projects



### **HCPSS Facilities and Land Bank**

The Howard County Public School System (HCPSS) maintains well over seven million square feet of school facilities and other buildings in service of delivering the educational program and for use by the community. This document examines utilization of the 73 elementary, middle, and high schools, and anticipates future schools.

### **HCPSS School Facilities**

#### 73 schools

- 41 elementary schools
- 20 middle schools
- 12 high schools
- 3 education centers

The HCPSS maintains sites for future school construction,

commonly known as the "Land Bank." Some properties are held by other parties for the future use by the Board of Education for school construction and when needed, the Board may utilize these properties. Most school site reservations result from agreements made during Columbia planning and development. Howard County has aided the school system in the past through exchanges of county land where needed. Opportunities for additions to the land bank in eastern Howard County to host projects noted in Figure 3.10 on page 15 are under consideration. An elementary school site is also sought to accommodate Turf Valley development. The HCPSS will continue to reach out to local and state agencies as it searches for additional sites along the Route 1 Corridor and other areas of identified growth. Table 3.3 shows the inventory of school sites presented in the annual capital budget:

Table 3.3 Land Bank

Owned Sites	Acreage	Location	Date Acquired	Cost					
Sunny Spring Drive	10	Sunny Spring Drive	Sunny Spring Drive 1974 \$1.00						
Future MS Site	41	2865 Marriottsville Road 2007 \$1,700,000							
Future School Site	8	Banbury Drive Parcel G	2013	\$4,200,000					
Faulkner Ridge Center	9.01	Marble Faun Lane	1968	\$1.00					
Reserved Sites	Acreage	Location		NO CONTRACTOR OF					
Clary's Forest	10	Little Patuxent Parkway ne	ar Bright Pass	age					
Dickinson	11	Eden Brook Drive and Wea	ther Worn W	ay					
Dickinson	20	Sweet Hours Way east of E	den Brook Dr	ive					
Harper's Choice	5	Rivendell and Cedar Lane							
Hopewell	10	Rustling Leaf and Deepage Drive							
nopewell									

# Feasibility Study

An Annual Review of Long-Term Capital Planning and Redistricting Options

# **Needs and Strategies**

Prior to examining future redistricting plans, it is necessary to review the implications of the new projection and identify needs and potential strategies. When school capacity utilization is outside of the acceptable range per Board of Education Policy (90–110 percent), redistricting may be considered.

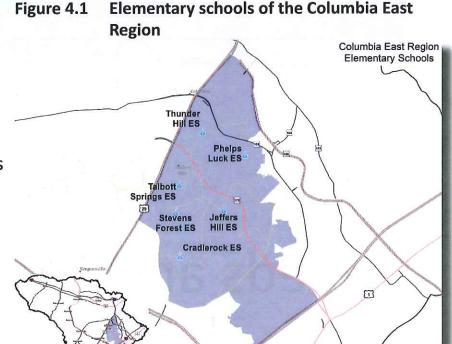
### Columbia East Region

### Need:

No capacity is needed in short term.

### Strategy:

Continue to model enrollment projections in future studies.



Most schools in this region will substantially remain within target capacity utilization as a result of approved redistricting and capital projects. Capacity increasing projects have recently been completed at Thunder Hill ES, Phelps Luck ES, and Stevens Forest ES. Thunder Hill ES will experience some crowding despite recent redistricting changes, but the anticipated rate of growth is not dramatic. Relocatable classrooms have been installed and this condition will be monitored. Talbott Springs ES shows some crowding, which is also addressed with relocatable classrooms. A renovation is planned that may be an opportunity to gain capacity through construction swing space depending upon renovation design and the availability of funding.

Table 4.1 Five year elementary school utilization in the Columbia East Region

Columbia - East			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Cradlerock ES	425	398	106.8	386	398	97.0
Jeffers Hill ES	467	421	110.9	444	421	105.5
Phelps Luck ES	553	616	89.8	539	616	87.5
Stevens Forest ES	404	399	101.3	419	399	105.0
Talbott Springs ES	433	377	114.9	424	377	112.5
Thunder Hill ES	552	509	108.4	580	509	113.9
Region Totals	2834	2720	104.2	2792	2720	102.6

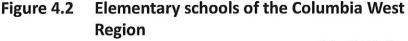
# Columbia West Region

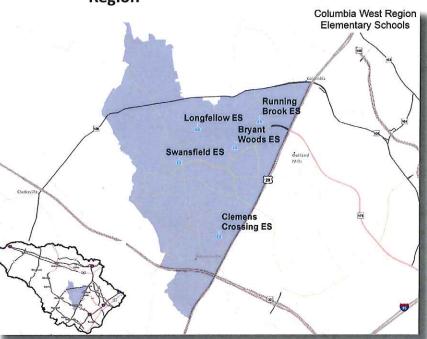
### Need:

The region will have existing capacity through 2020 despite growth at Running Brook ES

### Strategy:

Provide interim capacity within the region using the addition at Swansfield ES. Maintain Faulkner Ridge site for a future elementary school.





Investment in a 100-seat addition at Running Brook ES, which opened last August, has been a key capital project for managing growth in this area. Even with this addition, Running Brook ES is expected to continue to grow. A 100-seat addition is also planned at Swansfield ES and will open in 2018. A study of Columbia schools attached to the 2014 Feasibility Study recommended the Faulkner Ridge site for a new school. The combination of the additional capacity at these two schools will help to delay the need for a new school with feasible redistricting.

Table 4.2 Five year elementary school utilization in the Columbia West Region

Columbia - West			2015				2020
,	Projected		Projected		Projecte	d	Projected
	Pop.	Capacity	Utilization		Pop.	Capacity	Utilization
Bryant Woods ES	322	361	89.2		342	361	94.7
Clemens Crossing ES	500	521	96.0		530	521	101.7
Longfellow ES	428	512	83.6		436	512	85.2
Running Brook ES	517	405	127.7		735	505	145.5
Swansfield ES	555	521	106.5	Ŀ	519	621	83.6
Region Totals	2322	2320	100.1	Ŧ	2562	2520	101.7
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# Northeastern Region

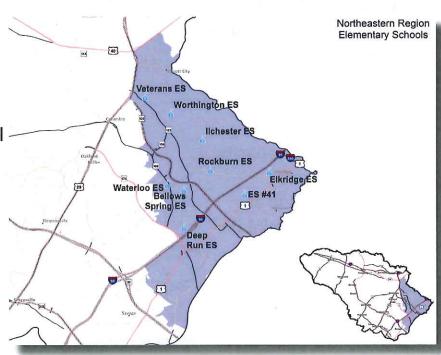
### Need:

There is adequate capacity in this region until 2017.

### Strategy:

Open Elementary School #42 in 2018.





Capacity utilization at Ducketts Lane ES will remain over 110 percent in 2020, even with the reassignment of regional programs to other locations. The region will exceed 115 percent utilization in 2021 and require close to 1,000 additional seats. The most elementary enrollment growth is in this region, east of Interstate 95. Accelerating the construction of Elementary School #42 to allow opening in 2018 was approved by the Board on March 26, 2015. This decision, with the change to the 788 seat model, helps respond to the growth trend.

Table 4.3 Five year elementary school utilization in the Northeast Region

Northeastern			2015				2020
	Projected		Projected	Proj	ected		Projected
	Pop.	Capacity	Utilization	Р	op.	Capacity	Utilization
Bellows Spring ES	668	751	88.9	8	86	751	118.0
Deep Run ES	708	672	105.4	9	03	772	117.0
Ducketts Lane ES	754	669	112.7	nes 1	354	669	202.4
Elkridge ES	790	760	103.9	8	340	760	110.5
Ilchester ES	698	653	106.9	6	18	653	94.6
Rockburn ES	605	672	90.0	6	00	672	89.3
Veterans ES	848	788	107.6	3 2 8	36	788	106.1
Waterloo ES	562	663	84.8		94	663	89.6
Worthington ES	537	590	91.0	4	73	590	80.2
Region Totals	6170	6218	99.2	7	104	6318	112.4

# Northern Region

### Need:

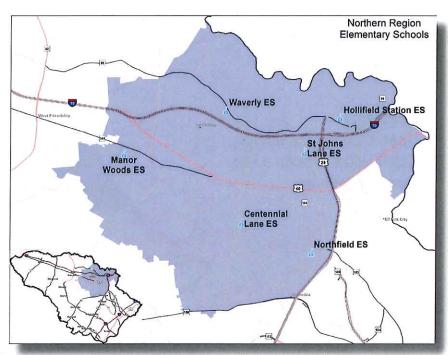
Monitor growth at Manor Woods ES and St. John's Lane ES.

### Strategy:

Complete the Waverly ES addition and plan for other new capacity.

Growth is projected at Manor Woods ES that will require redistricting and new capacity, depending upon the timing of the Turf Valley development. A key feature in capital planning for this development is the Phase II addition at Waverly ES. Constructing this addition in

Figure 4.4 Elementary schools of the Northern Region



2018 can help relieve overcrowding at Manor Woods ES. Previous feasibility studies have planned for a new elementary school in Turf Valley and considered the possibility that this could serve as a replacement for West Friendship ES. Considering the constraints to the capital budget, this plan should be adjusted. It remains a good idea to own land bank sites in the area, particularly a site in Turf Valley. In the interim West Friendship Elementary should be used to its fullest.

Table 4.4 Five year elementary school utilization in the Northern Region

Northern			2015				2020
	Projected		Projected		Projected		Projected
	Pop.	Capacity	Utilization		Pop.	Capacity	Utilization
Centennial Lane ES	683	647	105.6		769	647	118.9
Hollifield Station ES	713	694	102.7		834	694	120.2
Manor Woods ES	716	681	105.1		1257	681	184.6
Northfield ES	677	700	96.7		731	700	104.4
St Johns Lane ES	725	612	118.5		721	612	117.8
Waverly ES	688	638	107.8	ħ.	572	738	77.5
Region Totals	4202	3972	105.8	R	4884	4072	119.9

### Southeastern Region

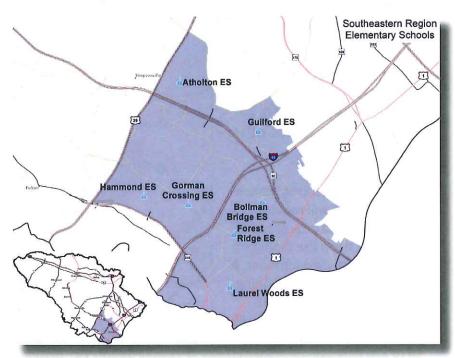
### Need:

Future enrollment growth is projected, primarily at Bollman Bridge ES and Forest Ridge ES.

### Strategy:

Open Elementary School #42 in 2018. Obtain a site for the land bank.

Figure 4.5 Elementary schools of the Southeast Region



Schools in the region, with the exception of Forest Ridge ES, are projected below 110 percent utilization at the start of this coming school year. Growth at Forest Ridge ES was anticipated in the last redistricting. It was planned for Forest Ridge to contain some of the growth that will later comprise the Elementary School #42 attending area. In the meantime, temporary capacity has been provided and more may be used in the near future. Growth continues in the region, supporting the opening of the next elementary school which is currently planned for 2018.

Table 4.5 Five year elementary school utilization in the Southeast Region

Southeastern			2015				2020
*	Projected		Projected		Projected		Projected
	Pop.	Capacity	Utilization		Pop.	Capacity	Utilization
Atholton ES	366	424	86.3		399	424	94.1
Bollman Bridge ES	708	666	106.3		796	666	119.5
Forest Ridge ES	744	669	111.2		846	669	126.5
Gorman Crossing ES	672	700	96.0		764	700	109.1
Guilford ES	490	465	105.4		553	465	118.9
Hammond ES	647	653	99.1		728	653	111.5
Laurel Woods ES	561	640	87.7	81	552	640	86.3
Region Totals	4188	4217	99.3	Ų	4638	4217	110.0

### Western Region

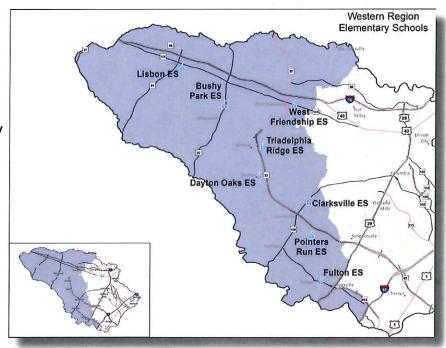
### Need:

Capacity is available which could be used to relieve other regions.

### Strategy:

Monitor projections and consider scenarios that may better use capacity.

Figure 4.6 Elementary schools of the Western Region



Elementary capacity in the Western Region exceeds need. Since the construction of Dayton Oaks ES and the replacement of Bushy Park ES, lower enrollment trends have been evident in the region. This trend seems to be tied to land use and housing value changes. West Friendship ES has consistently shown declining enrollment in recent projections. Previous studies examined closure of West Friendship ES but needs in the Northern region and limited capital funds now support using Western region capacity to relieve the Northern region. In the next region, growth at Fulton ES and Pointers Run ES may be balanced with redistricting that includes Clarksville ES and Dayton Oaks ES.

Table 4.6 Five year elementary school utilization in the Western Region

Western			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Bushy Park ES	611	788	77.5	602	788	76.4
Clarksville ES	467	612	76.3	430	612	70.3
Dayton Oaks ES	602	788	76.4	591	788	75.0
Fulton ES	756	788	95.9	878	788	111.4
Lisbon ES	410	527	77.8	447	527	84.8
Pointers Run ES	722	744	97.0	855	744	114.9
Triadelphia Ridge ES	523	581	90.0	620	581	106.7
West Friendship ES	278	414	67.1	236	414	57.0
Region Totals	4369	5242	83.3	4659	5242	88.9

# Columbia East Region

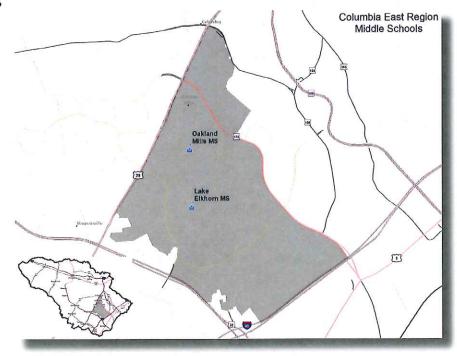
### Need:

Some capacity exists in this region.

### Strategy:

Monitor long-term needs.

Figure 4.7 Middle schools of the Columbia East Region



Lake Elkhorn MS has some available capacity for the foreseeable future. Oakland Mills MS is also on target for many years.

Table 4.7 Five year middle school utilization in the Columbia East Region

Columbia - East			2015				2020
	Projected		Projected		Projected		Projected
	Pop.	Capacity	Utilization	4	Pop.	Capacity	Utilization
Lake Elkhorn MS	500	643	77.8		557	643	86.6
Oakland Mills MS	431	506	85.2		489	506	96.6
(Region MS Totals)	931	1149	81.0		1046	1149	91.0

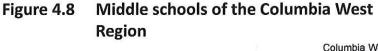
### Columbia West Region

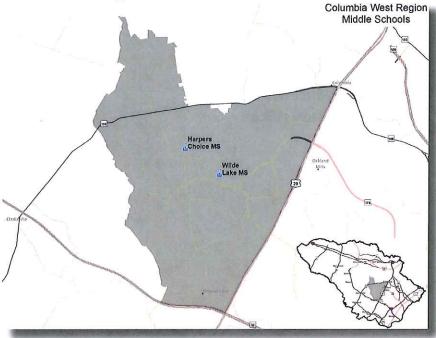
#### Need:

Enrollment exceeds 110 percent of regional capacity.

### Strategy:

Utilize temporary capacity until the replacement school is built at Wilde Lake MS in 2017.





The Columbia West Region capacity utilization is now above 110 percent. This supports the decision to replace Wilde Lake MS, a project that is scheduled to open in 2017. The new school is planned to be 293 seats larger than the existing one, and will stay within target utilization until 2024, based on the current projection. The pre- and post- measure charts show intermittent crowding at Harper's Choice MS, which does not happen to occur in the selected years below. This will be monitored for relocatable classroom consideration.

Table 4.8 Five year middle school utilization in the Columbia West Region

Columbia - West	(9)		2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Harpers Choice MS	546	506	107.9	542	506	107.1
Wilde Lake MS	573	467	122.7	692	760	91.1
(Region MS Totals)	1119	973	115.0	1234	1266	97.5

# Northeastern Region

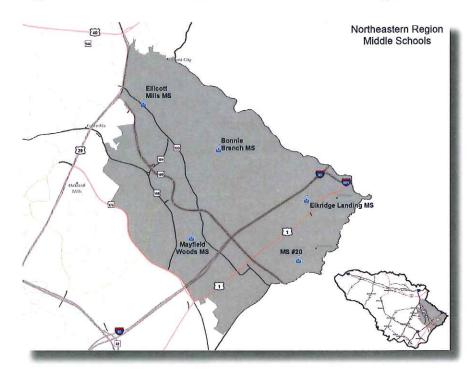
### Need:

Enrollment growth continues in the region.

### Strategy:

Projected crowding at Thomas Viaduct MS in the next decade will be monitored.

Figure 4.9 Middle schools of the Northeast Region



The opening of Thomas Viaduct MS relieved overcrowding at all schools except Ellicott Mills MS, which is slated for an addition of 156 seats in 2019. When elementary redistricting is considered to open ES #42, adjustments to middle schools should be considered. In the meantime, relocatable classrooms may be required until an alternative solution is implemented.

Table 4.9 Five year middle school utilization in the Northeast Region

Northeastern			2015			2020
	Projected		Projected	Projected		Projected
v	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Bonnie Branch MS	671	662	101.4	690	662	104.2
Elkridge Landing MS	716	779	91.9	672	779	86.3
Ellicott Mills MS	788	662	119.0	904	818	110.5
Mayfield Woods MS	681	798	85.3	858	798	107.5
Thomas Viaduct MS	570	701	81.3	865	701	123.4
(Region MS Totals)	3426	3602	95.1	3989	3758	106.1

# Northern Region

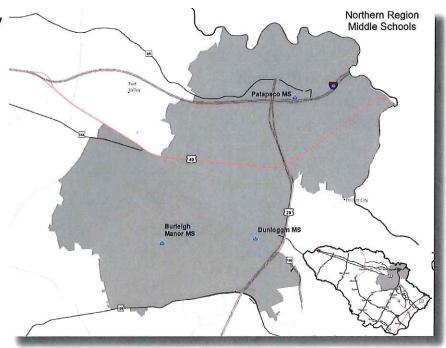
### Need:

Enrollment exceeds 110 percent of regional capacity after 2020.

### Strategy:

Monitor long-term needs.

Figure 4.10 Middle schools of the Northern Region



In the years beyond 2020, the Northern Region is projected to be above the 110 percent capacity utilization guideline. Dunloggin MS and Patapsco MS are scheduled for systemic renovations in the next few years. Additional capacity should be considered as part of these renovations or the use of temporary capacity may be needed. When continued growth in the adjacent Northeast Region is factored in with the needs of this region, the land bank site on Marriottsville Road will probably be needed to serve as a future middle school.

Table 4.10 Five year middle school utilization in the Northern Region

Northern			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Burleigh Manor MS	771	779	99.0	868	779	111.4
Dunloggin MS	615	565	108.8	660	662	99.7
Patapsco MS	718	643	111.7	756	643	117.6
(Region MS Totals)	2104	1987	105.9	2284	2084	109.6

# Southeastern Region

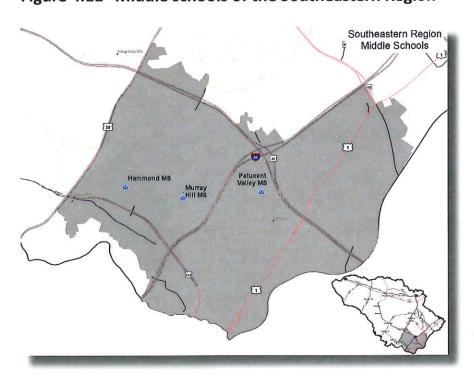
### Need:

Enrollment growth is evident in the region.

### Strategy:

Long-term growth trends in this region should be monitored.

Figure 4.11 Middle schools of the Southeastern Region



Hammond MS and Murray Hill MS are projected to exceed 110 percent capacity utilization in 2020. Relocatable classrooms are available at both schools, which would manage this crowding through 2020. The region will exceed 110 percent utilization in 2020 and enrollment will continue to gradually rise for the foreseeable future. Projected needs beyond this time period will be monitored.

Table 4.11 Five year middle school utilization in the Southeastern Region

Southeastern			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Hammond MS	582	604	96.4	710	604	117.5
Murray Hill MS	624	662	94.3	792	662	119.6
Patuxent Valley MS	676	760	88.9	757	760	99.6
(Region MS Totals)	1882	2026	92.9	2259	2026	111.5

## Middle Schools

# Western Region

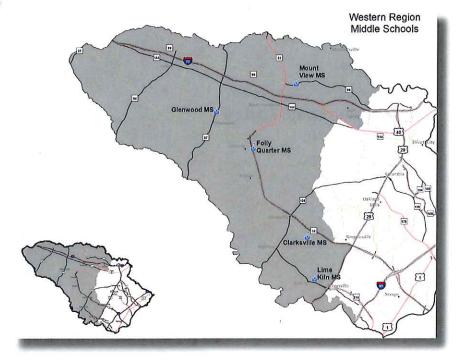
### Need:

Figure 4.12 Middle schools of the Western Region

Some capacity exists in this region.

### Strategy:

Monitor long-term needs.



Capacity utilization in the region remains within targets throughout the projection. A land bank site in the northeastern end of this region on Marriottsville Road must be retained for a new middle school, which will ultimately relieve crowding in the Northern and Columbia West Regions.

Table 4.12 Five year middle school utilization in the Western Region

Western		•	2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Clarksville MS	621	643	96.6	562	643	87.4
Folly Quarter MS	607	662	91.7	675	662	102.0
Glenwood MS	577	545	105.9	578	545	106.1
Lime Kiln MS	724	701	103.3	765	701	109.1
Mount View MS	743	798	93.1	823	798	103.1
(Region MS Totals)	3272	3349	97.7	3403	3349	101.6

# Columbia East Region

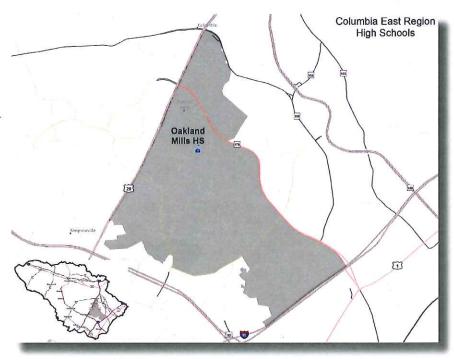
### Need:

Some capacity exists in this region.

### Strategy:

Consider using capacity to help accommodate Route 1 corridor growth.

Figure 4.13 High schools of the Columbia East Region



The Columbia East Region high school is Oakland Mills HS. Capacity exists at this school for the foreseeable future. Capacity may be utilized to relieve the Northeastern Region, which includes Long Reach HS and Howard HS. Long-term planning discussions are likely to be framed by future additions to the land bank.

Table 4.13 Five year high school utilization in the Columbia East Region

Columbia - East			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Oakland Mills HS	1101	1400	78.6	1164	1400	83.1

# Columbia West Region

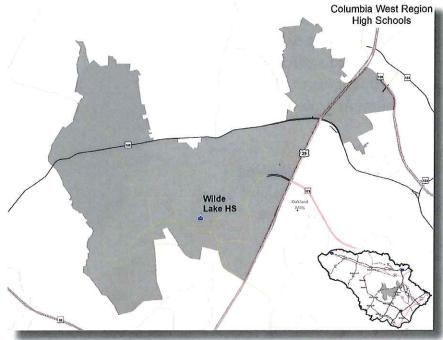
### Need:

Figure 4.14 High schools of the Columbia West Region

Capacity utilization is below 110 percent for Wilde Lake HS until 2027.

### Strategy:

Monitor projections.



The Columbia West Region high school is Wilde Lake HS. The projection for this school remains between 90–110 percent utilization until 2027. With only a few classrooms of remaining capacity, plans to redistrict students into Wilde Lake HS should be avoided unless absolutely necessary. This projection models the effect of the Columbia Town Center development without the adjustment presented in the addendum. Adequate capacity exists to accommodate growth at Wilde Lake HS until 2027.

Table 4.14 Five year high school utilization in the Columbia West Region

Columbia - West			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Wilde Lake HS	1279	1424	89.8	1526	1424	107.2

# Northeastern Region

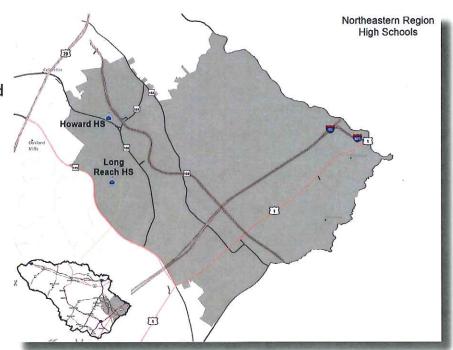
### Need:

Significant enrollment growth is projected.
Available capacity in this region is not sufficient to absorb long-term projected enrollment growth.

### Strategy:

Evaluate capital planning options of additions and acquisition of a future school site.

Figure 4.15 High schools of the Northeastern Region



Howard HS and Long Reach HS serve the Northeastern Region. Howard HS already is exceeding 110 percent utilization. This fall the region will likely exceed 110 percent capacity utilization and the trend is expected to steadily worsen through the projection, exceeding 120 percent by 2017. The school system has added temporary capacity to both schools and the nine classroom modular building will be installed at Howard HS this summer. Movement of regional programs may be considered.

Projections indicate the eventual need for a new high school. For this reason, acquisition of a large school site to the land bank is necessary. A site should large enough for a high school. In the meantime, interim strategies such as redistricting and locations for regional programs and minor changes to school capacity should be revisited Measures to delay the need for a new high school will save capital resources for other projects.

Table 4.15 Five year high school utilization in the Northeastern Region

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Northeastern			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Howard HS	1751	1420	123.3	2015	1420	141.9
Long Reach HS	1522	1488	102.3	2047	1488	137.6
(Region HS Totals)	3273	2908	112.6	4062	2908	139.7

# **Northern Region**

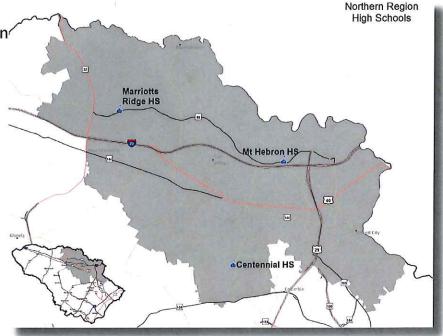
### Need:

Figure 4.16 High schools of the Northern Region

Capacity needs in the region have been addressed with the expansion of Mt. Hebron HS.

### Strategy:

Monitor long-term needs.



The Northern Region has balanced capacity utilization for most of the projection. Centennial HS and Mt. Hebron HS will need to be monitored given the projected utilization rises above 110 percent after 2017 and 2016. Capacity remains at Marriotts Ridge HS for this region and could potentially accommodate regional programs.

Table 4.16 Five year high school utilization in the Northern Region

Northern			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Centennial HS	1455	1360	107.0	1690	1360	124.3
Marriotts Ridge HS	1209	1615	74.9	1420	1615	87.9
Mt Hebron HS	1504	1400	107.4	1765	1400	126.1
(Region HS Totals)	4168	4375	95.3	4875	4375	111.4

# Southeastern Region

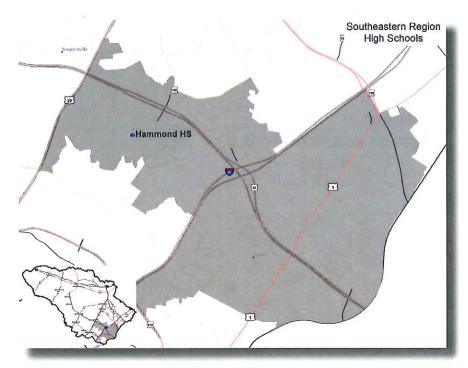
### Need:

Capacity is adequate through 2017.

### Strategy:

Monitor long-term needs.

Figure 4.17 High schools of the Southeastern Region



The Southeastern Region exceeds 110 percent capacity utilization in 2017 and steadily increases later in the projection. Perhaps some capacity may be realized during the renovation of Hammond HS, but the existing facility is not matched to projected growth later in the long-range planning period. This future growth supports the recommendations of land banking a high school site and adding plans for a facility to the long-range plan. In the meantime, interim strategies like redistricting, considering alternative locations for regional programs, and minor changes to school capacity should be revisited. If any measures can delay the need for a new high school, capital resources can be saved for other projects .

Table 4.17 Five year high school utilization in the Southeastern Region

Southeastern			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Hammond HS	1299	1220	106.5	1550	1220	127.0

# Western Region

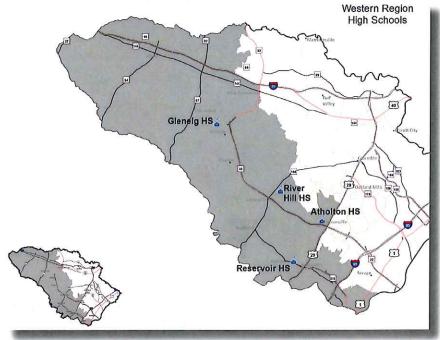
### Need:

Figure 4.18 High schools of the Western Region

Relief is needed at Reservoir HS after 2017.

### Strategy:

Monitor long-term needs.



The Western Region does not exceed 110 percent capacity utilization until 2024, and no redistricting or major capital planning appears to be necessary through most of the decade. Reservoir HS and Atholton HS should be monitored because this projection indicates they will exceed 110 percent utilization in 2018 and 2017, respectively. Atholton HS capacity should also be re-evaluated at the end of the renovation this year. Some areas of the Reservoir HS attending area are part of the Route 1 corridor; eventually this growth may be addressed with a new high school.

Table 4.18 Five year high school utilization in the Western Region

Western			2015			2020
	Projected		Projected	Projected		Projected
	Pop.	Capacity	Utilization	Pop.	Capacity	Utilization
Atholton HS	1447	1360	106.4	1623	1360	119.3
Glenelg HS	1268	1420	89.3	1277	1420	89.9
Reservoir HS	1510	1551	97.4	1894	1551	122.1
River Hill HS	1266	1488	85.1	1258	1488	84.5
(Region HS Totals)	5491	5819	94.4	6052	5819	104.0

# **Howard County Public School System**

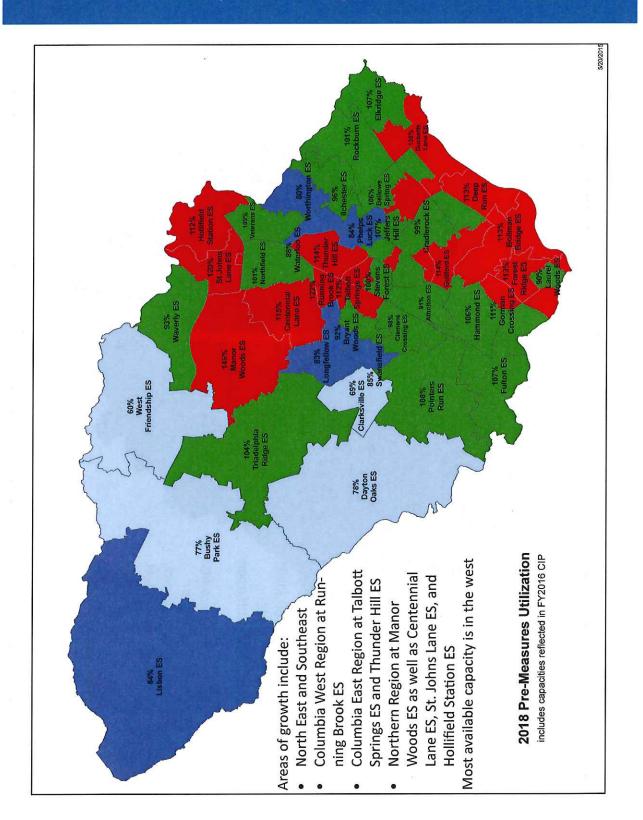
Feasibility Study
An Annual Review of Long-Term Capital
Planning and Redistricting Options

# Foreseeable Redistricting

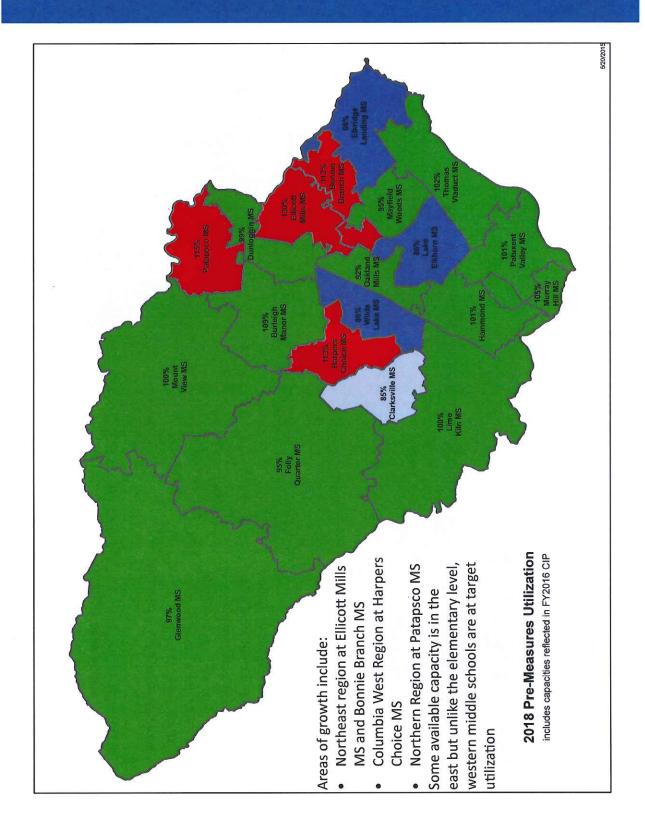
This report does not recommend any redistricting until 2017 when redistricting is needed to open ES #42. This would be conducted between June and November 2017 and take effect at the beginning of the 2018 school year.

June 2015

# Foreseeable Elementary Redistricting



# Foreseeable Middle Redistricting



# Elementary School Redistricting - ES # 42



Opening Elementary School #42 will allow relief of Ducketts Lane ES and other schools in the Northeast region. The school will be located adjacent to Thomas Viaduct MS. Any redistricting plan may involve a combination of schools including Bollman Bridge ES, Ducketts Lane ES, and Forest Ridge ES. Table 5.1 illustrates one possible scenario for testing purposes only. This plan was anticipated when the redistricting to open Ducketts Lane was planned, so most students come from Ducketts Lane ES. Ducketts Lane ES capacity utilization would be reduced from a projected 137 percent utilization to a projected 90 percent utilization, depending on regional program assignments. This plan considers neighborhoods like Oxford Square, Lennox Park, and Howard Square, as well as Cedars and Washington Manor for ES #42. Rockburn ES attending area has included a somewhat distant neighborhood, in the vicinity of Mission Road, which may also be considered for ES #42. This frees up Rockburn ES to receive the Brightfield area from Bellows Spring ES. Actual redistricting plans would be decided in the fall of 2017, allowing for further study of feasible redistricting in the June 2016 Feasibility Study.

Table 5.1	ES #4	42 Redistricting
Sending	Receiving	Appx. # Students
Bellows Spring	Rockburn	73
Ducketts Lane	New ES #42	384
Rockburn	New ES 42	151
Total		608

# Elementary School Redistricting - Columbia West

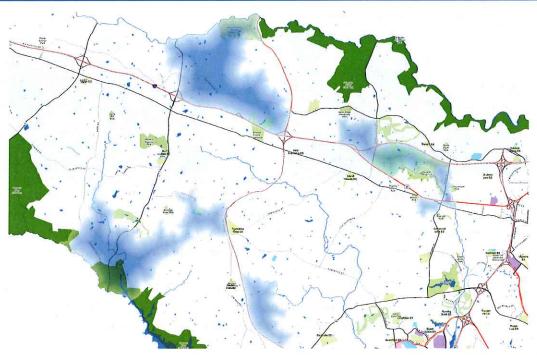


The FY 2016 Long-Range Master Plan indicated a new elementary school may serve this area in 2025 as ES #44. The Howard County Planning Board has suggested this area be served by ES #43, which is slated for opening in 2023 in the Long Range Plan. Either way, funding constraints are likely to dictate a later opening. The Columbia schools study attached to the 2014 Feasibility Study identified the best location for this school to be where the Faulkner Ridge Center building is presently located.

Since capacity is needed prior to any likely funding of this new school, an interim plan is needed. Interim Columbia West elementary school redistricting will take advantage of capacity in the region and is anticipated to occur in 2018, depending upon when the Swansfield addition opens. A recent addition at Running Brook ES is not sufficient to contain expected growth. Existing capacity at the other schools, including the addition at Swansfield ES, will facilitate redistricting within the region. Some small feeds are anticipated with interim redistricting, but they can be resolved when ES #44 opens.

Table 5.2. Interim Co	lumbia West Elementary Re	edistricting	
Sending	Receiving	Appx. # Students	
Bryant Woods	Clemens Crossing	94	
Bryant Woods	Longfellow	71	
Clemens Crossing	Swansfield	110	
Running Brook	Bryant Woods	148	
Running Brook	Clemens Crossing	20	
Total		443	

# Elementary School Redistricting - Northern and Western



New development of Turf Valley is projected to add 2,000 homes by 2024 and yield nearly 700 new ES students. This development is presently in the Manor Woods ES attending area, which is projected to exceed 110 percent utilization in 2016, and cannot serve the anticipated growth. ES #45, a new elementary school in or near Turf Valley, is eventually needed. Much of the attending areas for existing schools in the Northern and Western regions will be bused regardless of the school assignment, but a Turf Valley school could have an assigned walk area. Capital funding challenges are likely to further delay ES #45 which is already shown in the FY 2016 Long Range Master Plan for funding beginning in FY 2023 and completion likely in 2026.

Since the FY 2017 Long Range Master Plan is expected to shift projects further into the future, interim measures are necessary.

Nearby West Friendship ES and Bushy Park ES



Future development is in the Manor Woods ES attending area which is projected to exceed 110% utilization in 2016.



West Friendship ES has approximately 135 open seats.

# Elementary School Redistricting - Northern and Western



The second phase addition to Waverly ES will help relieve crowding in the Northern Region.



Bushy Park ES could contain Northern Region growth with some adjustments to other western attending areas.

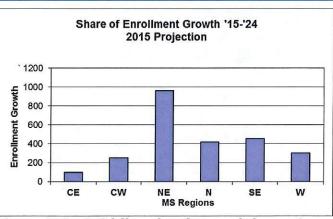
have capacity, and a 100 seat addition has been planned for Waverly ES in the coming years. A number of scenarios have been evaluated. Many would require West Friendship to take on higher enrollment. Such plans would probably necessitate investment in wastewater treatment capacity and temporary classrooms at West Friendship ES.

Another interim strategy may borrow from the approach used between ES #41 and ES #42. In that case, the Mission Road area was assigned to Rockburn ES temporarily until new capacity opens in 2018 at ES #42. Staff has modeled a similar idea, which, would send new Turf Valley neighborhoods to Bushy Park ES. Adjustments among other western schools could create enough space at Bushy Park to contain this growth. A particular benefit of this plan is that West Friendship ES capacity is used, but the school would not be overcrowded, avoiding temporary capacity or other investment. Chronic excess capacity further west at Bushy Park ES and Dayton Oaks ES is also used. Such a plan requires fewer students to be reassigned than a plan that avoids creating such attendance "islands."

Table 5.5. Northern a	ind Western Elementary Re	
Sending	Receiving	Appx. # Students
Bushy Park	West Friendship	82
Bushy Park	Dayton Oaks	111
Dayton Oaks	Triadelphia Ridge	50
Manor Woods ES	Bushy Park	210
Manor Woods ES	Waverly ES	44
Manor Woods ES	West Friendship	83
Triadelphia Ridge	Dayton Oaks	99
Waverly	West Friendship	44
Total		723

# Middle School Redistricting





Thomas Viaduct ES opened this school year.

Figure 5.1 Middle school growth by region

The opening of Thomas Viaduct MS has eased the near term crowding concerns in the Route 1 corridor, particularly the Northeast Region. Future enrollment growth is expected. By 2024, the middle school level is projected to exceed 110 percent capacity utilization. The largest share of enrollment growth is in the northeast region, followed by the northern and southeast regions. By 2025, two of five middle schools in Northeast region will have significant overcrowding. The same will be true for two of the three Southeastern region middle schools. Site acquisition efforts are underway for MS #21, and an addition is planned for Ellicott Mills MS, but funding is not certain.

Feasible redistricting of approximately 600 students could bring more schools within target utilization for using only existing capacity. Small feeds could be reduced, especially if the redistricting is conducted with elementary redistricting to open ES #42. Such a plan does not suggest additions at Ellicott Mills MS and renovations at other schools are not necessary. Evaluation of plans will continue in future feasibility studies.



An addition is planned for Ellicott Mills MS in 2019. If deferred, some capacity exists in nearby regions.

# **High School Redistricting**



Howard HS is in the region projected to receive the largest share of enrollment growth.

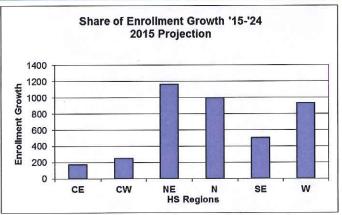


Figure 5.2 High school growth by region

Howard HS is experiencing overcrowding. Capacity needs are also projected for Long Reach HS and Hammond HS. The small amount of capacity at Oakland Mills HS is not sufficient to balance these needs. The trends eventually point to the need for a new high school. A land bank site is being sought for a high school, but even when a site is acquired it will be prudent to delay such a large capital investment until other options have been thoroughly vetted.

The long-range plan recommended is completion of HS #13 in 2027, but a funding delay is probable. As an interim measure, a nine classroom modular building will be installed at Howard HS. It is likely that the review of the current redistricting process may generate different options and alternatives. A broad evaluation of regional programming assignments or other measures could include consideration of existing capacity at four of the 12 high schools. Such a discussion does not mean a new high school is off the table, but it could bring relief from crowding much earlier than even the most optimistic HS #13 opening date.



Hammond HS serves the Southeast Region.

Atholton HS presently under renovation.

# **Howard County Public School System**

# Feasibility Study

An Annual Review of Long-Term Capital Planning and Redistricting Options

# Pre- and Post-Measure Charts

The effects of some scenarios tested for this report on capacity utilization are depicted in tabular form on the following pages. The tables are presented for each organizational level (elementary, middle, and high) using a pre-/post-measures format. The pre-measures format shows the effect of projected enrollment without any redistricting. The pre-measures format also shows FY 2016 capital projects as approved.

The post-measures format shows the impact of projected enrollment with some redistricting plans discussed in this document. These plans include elementary redistricting and a middle school redistricting scenario that uses existing capacity. It is premature to provide specifics since changes may develop before the June 2017 Feasibility Study. The post-measures format includes capital projects recommended in this document for the FY 2017 Capital Budget as shown in Table 3.2 on page

9. If these projects are not approved, other plans must be developed.

June 2015

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Pre Measures Chart Page 46 Elementary Schools

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Post Measures Chart Page 47 Elementary Schools

Columbia Fiend 2017 2019 2017 2019 2017 5019 4019 5019 4019 5019 5019 5019 5019 5019 5019 5019 5	Chart reflects May 201	5 Projection	3. Board	of Educa	Ition's F	Y 2016	) approved ca	apacities,	VUtilizativ	on Kate	S with B	Capacity Utilization Rates with Board of Education's Approved FY 2016 Capital Budget Projects - Not Test for APFO capacities, and no redistricting.	ucation's	Approv	ed FY ?	2016 Ca	pital Buo	lget Pro	ects - N	lot Test	for AP						
Poly Null.         Poly Nu			Cap	acity		20	116-17	20	17-18	20	18-19	2019	.20	2020-	21	2021	72	2022-2	3	2023	24	202	4.25	20	25-26	20	17-97
573         7132         574         713         525         681         715         713 <th>Columbia - East</th> <th>2016</th> <th></th> <th>2018</th> <th>2019</th> <th>Proj</th> <th>% Util.</th> <th>CO.C.F.</th> <th>% Util.</th> <th></th> <th>% Util.</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Proj %</th> <th>Pil.</th> <th></th> <th>% Util.</th> <th>- 1</th> <th>% Util.</th> <th>Proj</th> <th>% Util.</th>	Columbia - East	2016		2018	2019	Proj	% Util.	CO.C.F.	% Util.		% Util.									Proj %	Pil.		% Util.	- 1	% Util.	Proj	% Util.
65.73         71.32         57.4         71.32         55.4         71.02         85.4         102.6         85.1         103.6         91.1         103.6         <	Lake Elkhorn MS	E 8		643	643	503	78.2		85.2	553	86.0	204		750						720 7	99.9		65.4	248	7.58	200	06.3
17.2   17.4   17.5	Region MS Totals	1149			1149	937	81.5		85.8	1022	88.9	1038		1046 9		1049 9				1035	10.1		89.4	1032	89.8	1050	91.4
651         713         542         7113         542         7103         543         7103         543         700         563         103         553         103         553         103         555         103         554         1115         561         115         700         408         715         700         700         700         700         700         700         700         700         700         661         700         661         700         681         102         681         103         883         1145         700         700         883         700         70																											
1734   975   1707   1705   92.8   92.5   93.1   93.4   1753   100.4   819   101.8   869   114.3   888   116.8   102.9   865   114.3   888   116.8   102.9   865   114.3   888   116.8   102.9   865   114.3	Columbia - West	202		505	202	77.7	113.4			573	1130			-		-		101		£40 F.	78.5		109 3	555	1097	564	1116
1234   975   1279   1010   1234   975   1263   998   1259   994   1312   1025   681   1025   686   1035   6	Wilde Lake MS			2002	760		128.3 C	648		661	87.0					-		710 93		763 7	00.4		107.8	869	114.3	88	116.8
753         713.7         734         110.9         690         104.2         662         965         667         99.2         663         700.2         681         102.6         661         105.1         666         105.6         667         105.2         683         700.2         681         700.2         681         707.2         91.4         731         938         732         700.2         700.2         700.2         700.2         700.2         700.2         700.2         681         707.2         91.4         731         938         700.2	Region MS Totals	973			1266	1173	120.6	1243	98.2	1234	97.5							259 99			03.6		108.4	1424	112.5	1452	114.7
182	Northeastern																										
67.7         86.4         677         86.9         67.7         86.5         74.4         71.7         71.2         91.4         731         93.8         74.3         96.4           78.6         96.9         71.02         867         106.5         886         106.5         886         104.0         867	Bonnie Branch MS	662		662	662		105.1	726	109.7		113.7	•									00.2		102.9	989	103.6	969	105.1
862   190 2   691   111   904   116 5   899   106 3   861   106 3   861   106 3   886   101 6   865   101 0   865   101 0   865   101 0   865   101 0   865   102 0   86	Elkridge Landing MS	779		779	779		88.7		87.8		86.4										Н.7		91.4	731	93.8	743	95.4
756         96.9         827         113.5         920         115.3         C 100         123.2         C 1307         184.4         C 1808         121.3         C 1000         125.3         C 120.1         C 659         C 1550         178.7         C 1307         186.4         C 120.1         C 4594         120.2	Ellicott Mills MS	662		662	818			832		862		606									04.6		101.0	851	104.0	867	106.0
770 102.7 806 715.0 865 7123.4 C 959 7126.5 C 198 712.1 C 1170 166.9 C 1253 178.7 C 1307 186.4 C 3773 104.7 3953 105.2 3969 106.1 4101 109.1 4133 110.0 4289 114.1 4389 116.8 C 4514 120.1 C 4554 122.2 C 86 99.1 867 99.1 868 99.1 868 99.1 86.2 770 172.5 C 770	Mayfield Woods MS	798		798	798		89.2		93.7		95.9								U	968 1							
851 7103 2         860 7104 7         3969 7106 1         4101 7109 1         4289 7123 C         997 7128 0         7136 0         675 120 C	Thomas Viaduct MS			701	701	T 1	86.2		296.4		102.7				U		C		v	1088 7							
851 103 2 860 1104 868 1114 899 1154 C 953 122.3 C 997 1280 C 1059 135.9 C 1092 140.2 C 1106 142.0 C 2551 103 0 2254 103 2 2284 109 6 2350 112.8 2415 112.8 C 778 121.6 C 778 121.0 C 789 122.7 C 804 125.0 C 778 121.0 C 789 122.7 C 804 125.0 C 778 121.0 C 789 122.7 C 804 125.0 C 770 116.3 C 760 114.8 752 119.6 C 811 122.6 C 770 116.3 C 769 116.2 C 769 116.2 C 771 116.5 C 760 114.8 722 119.6 C 811 122.5 C 770 116.3 C 769 116.2 C 771 116.5 C 771 117.5 C 771 116.5 C 771 117.5 C 771 117.	Region MS Totals	3602	27.	3602	3758	50	6.96		101.8	3773	104.7	•		-		1	-	`		•	14.1				_		
656         99.1         656         99.1         656         99.1         656         99.1         666         99.7         672         101.5         678         102.4         679         102.6         687         103.8         683         103.2         697         105.3           2261         108.0         2254         108.2         2254         109.6         2360         112.8         2415         11.6         C         789         122.7         C         804         12.9         C         789         122.7         C         804         12.1         C         2524         121.1         C         2607         12.6         C         2607         12.8         C         2677         117.9         C         789         780         10.9         C         2697         12.8         C         2677         117.9         C         789         118.8         8.9         133         8.2         138         8.9         133         8.2         14.8         8.9         138         8.2         14.8         8.2         14.8         8.2         14.8         8.2         14.8         8.2         14.8         8.2         14.8         8.2         14.8         14.8	Northern Burleich Manor MS	77.9	77.	477	47.		104.2		107.4		109.2		10.4				U		ں		28.0 C	1059		1000			
2551         108.0         2254         108.0         2254         108.0         2254         108.0         2254         108.0         2257         C         804         128.0         C         2251         108.0         2254         108.0         2254         108.0         2257         C         804         128.0         C         804         128.0         C         804         128.0         C         804         128.0         C         267         108.0         108.0         128.0         C         269         118.0         C         2524         121.1         C         269         118.0         C         269         128.0         C         769         108.0         128.0         C         269         108.0         108.0         133.1         C         804         133.1         C         804         133.1         C         804         133.1         C         804         133.1         C         809	Dunloadin MS			662	662		114 0		114 9	656	1 66	656 "		650 7								687					105.3
2251 108.0 2254 108.2 2284 109.6 2350 112.8 2415 115.9 C 2457 117.9 C 2554 121.1 C 2554 123.0 C 2607 125.1 C	Patapsco MS			643	643		112.4		115.7			738		756 71	v		U		v		21.5 C	778			122.7		125.0
611 701.2 648 707.3 710 717.6 C 777 718.7 C 743 723.0 C 759 725.7 C 804 133.1 C 814 134.8 C 829 137.3 C 700 705.7 T 750 714.8 722 719.6 C 777 71.6 C 777 716.5 C 7	Region MS Totals	1987		2084	2084	2179	109.7		112.2	2251	108.0	2254 1							U	1		2524		6.00			_
611 710.2 648 7107.3 710 717.5 C 717 718.7 C 743 7123.0 C 759 7126.7 C 804 133.1 C 814 134.8 C 829 137.3 C 760 7105.7 750 714.8 792 719.6 C 811 712.5 C 770 716.3 C 768 716.0 C 769 716.2 C 771 716.5 C 761 715.0 770 710.5 7 771 716.5 C 761 715.0 770 710.8 796 715.0 796 715.0 799 716.2 C 771 716.5 C 761 715.0 799 710.8 799 710.																											
760 7105.7 760 714.8 792 719.6 C 811 712.5 C 770 716.3 C 768 716.0 C 769 716.2 C 771 716.5 C 761 115.0 769 710.2 735 96.7 756 716.2 C 771 716.5 C 771 716.5 C 761 115.0 769 710.2 735 710.8 730 710.	Southeastern Hammond MS	604		604	604		8 66		96.2		1012	648			U	717 711	U	743 712	U			804					
769         710.2         736         96.7         736         76.8         75.7         99.1         766         700.8         75.7         99.6         736         736         766         700.8         750         103.9         829         109.1           2080         102.7         2143         106.8         2259         111.5         2280         112.5         2339         115.4         C         2419         117.2         2         2419         117.2         2         2319         117.2         C         2419         117.2         2         241         117.4         2 <t< td=""><td>Mirray Hill MS</td><td>662</td><td></td><td>662</td><td>662</td><td>673</td><td>71017</td><td></td><td>105.7</td><td></td><td>105.7</td><td>760 7</td><td></td><td></td><td>U</td><td>811 712</td><td>U</td><td>770 711</td><td>U</td><td></td><td></td><td>769</td><td></td><td></td><td></td><td></td><td></td></t<>	Mirray Hill MS	662		662	662	673	71017		105.7		105.7	760 7			U	811 712	U	770 711	U			769					
2080 102.7 2143 105.8 2259 1115 2254 111.3 2249 1110 2280 1125 2339 115.4 C 2375 117.2 C 2419 119.4 C 2417 85.1 562 87.4 562 87.4 562 88.8 548 85.2 562 85.8 572 89.0 584 90.8 590 91.8 629 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.	Patuxent Valley MS	760		760	760	737	97.0		93.0	692	101.2	735 "		757 9		726 9		736 7 96		753 6		992			103.9	829	109.1
647         86.1         562         87.4         562         86.8         548         85.2         562         76.8         572         89.0         584         90.8         590         91.8           629         56.0         678         102.4         675         102.0         66.4         103.3         673         101.7         688         703         770         106.8         688         103.9           732         702         676         106.1         599         112.0         676         104.6         590         103.9           702         700.1         724         107.6         766         109.1         789         112.0         676         114.6         590         109.8         14.0           788         100.0         824         103.3         823         102.4         786         107.5         910         14.0         938         17.5         C 984         123.3         C           3208         55.6         3377         100.6         3429         102.4         3400         101.5         3468         103.6         3576         106.6         3671         109.0           13588         100.7         14044         1	Region MS Totals	2026		2026	2026	$\mathbf{H}$	99.4		98.1	2080	102.7	<b>N</b>		-	200	-		-		-	12.5	-		15.85	117.2	2419	119.4
647 66.1 562 87.4 562 87.4 552 85.8 548 85.2 552 85.8 572 89.0 584 90.8 590 91.8 629 95.0 672 95.0 678 102.4 675 102.0 684 103.3 673 101.7 686 103.6 710 107.3 707 106.8 688 103.9 702 102.0 17.6 102.4 675 102.4 675 102.0 694 103.3 673 102.6 677 104.6 570 104.6 596 109.4 590 108.3 522 79.6 559 102.6 567 104.8 814 116.1 C 807 115.1 C 799 114.0 702 100.0 824 103.3 823 103.1 780 112.8 833 104.4 858 107.5 910 114.0 938 117.5 C 799 114.0 702 100.0 824 103.3 823 103.1 820 102.8 833 104.4 858 103.6 3576 106.8 3632 108.5 3651 109.0 135.8 100.7 140.4 103.0 142.15 104.3 144.6 106.0 144.91 106.3 142.7 111.7 155.4 114.0 15773 115.7 115.7 155.4 114.0 15773 115.7 115.7 115.7 115.7 115.7 115.7 115.7 115.7 115.7 111.7 155.4 114.0 15773 115.7 115.	Western											- 3					L		Н								
629 56.0 678 102.4 675 102.0 664 103.3 673 101.7 686 103.6 770 107.3 707 106.8 688 103.9 673 101.7 702 101.0 62.0 102.5 559 10	Clarksville MS	643		643	643		94.2		87.9		85.1				7.4						35.8		89.0	584	8.06	230	91.8
532 97.6 559 102.6 578 106.1 529 108.3 559 102.6 567 104.0 57.0 104.6 596 109.4 599 108.3 570 104.6 596 107.6 596 107.6 596 109.4 599 108.3 599 108.3 569 10	Folly Quarter MS	99		99	662	604	912		95.6		95.0				05.0						03.6		107.3	707	106.8	688	103.9
702 100.1 754 107.6 765 119.1 783 111.7 787 112.3 805 114.8 814 116.1 C 807 115.1 C 799 114.0 798 114.0 798 1100.0 382 103.3 823 103.1 823 104.4 856 107.5 910 114.0 936 117.5 C 984 123.3 C 3208 95.8 3377 100.8 3403 101.6 3429 102.4 3400 101.5 3468 103.6 3577 111.7 15541 114.0 15773 115.7 13568 100.7 14044 103.0 14215 104.3 14446 106.0 14491 106.3 14841 108.9 15277 111.7 15541 114.0 15773 115.7	Glenwood MS	545			545	561	102.9		102.9		97.6				1.90						070						108.3
7308 958 3377 100.8 3430 101.6 3429 102.0 358 101.6 358 103.6 357 100.8 3632 108.5 3851 109.0 13568 100.7 14044 103.0 14215 104.3 14446 106.0 14491 106.3 14841 108.9 1527 111.7 15541 114.0 15773 115.7	Lime Kiln MS	701			107	728	103.9		102.3		100.1				13.1						14.8						
3200 35.0 35.7 100.0 3400 101.0 3425 102.4 3404 106.3 14841 108.9 15227 111.7 15541 114.0 15773 115.7	Midum view ivid	130	-	-	2240	+	0.40	1.	0.70	2000	0.00			-			t	-	ĺ	1	250		105.8	2630			
	Countraido Totale	ľ	13379				7 66	- 00	6 66	13568	1007		Ê		Ĺ		Ė	-	ľ	1	08.9	-	111.7	15541	114.0	15773	115.7
	A includes additions	s reflected in	1 FY 201	6 CIP for	r grades	8-8		1																			
	'R' = Replacement sch	ool schedule	d to obe	n Augus	t 2017																						

Middle Schools

Post-Measures										MIDD	E SCH	1-870C	Data for	MIDDLE SCHOOLS - Data for Demonstrative Purposes Only	strative	Purpos	es Only									
Aggregate Plan Chart reflecte May 2015 Desirations Board of Education's EV 2047 Desirated account	niortione	30 pard of	Editoritie	2	2047 Dec	P P P P P P P P P P P P P P P P P P P		Cap	acity Ut	lization R	ates with	Propose	ed FY 2	Capacity Utilization Rates with Proposed FY 2017 Capital Budget Projects - Not Test for APFO	ital Bud	jet Proje	cts - No	t Test for	r APF0							
Cilar tenecia way 2013 i	oleculous,	Cap	Capacity		2 2	2016-17		2017-18 2018-19	Sinal name	2018.19	201	2019.20	200	2020.21	2024 22	n	CUC	24 6406	AC 5505	24	SC ACOC	35	or acuc	20	2036 22	22
Columbia - East	2016	7	2018	2019	Proj	% Util.	Proj	% Util.	Proj	% Util.		% Util.		% Util.	21	% Util.	Proi 9	% Ihil.	5	% Iliil	Proi %	1 IIII %		07-70 W 11411	Proi %	17-07
Lake Elkhorn MS	643	643	643		503	78.2	548		990			110,1	702	109.2	720	112.0		110.1	705	109.6		108.6	969	108.2		1115
Oakland Mills MS	909		909	909	434	85.8	438	9.98	559			113.2		117.0 C		114.6	576	113.8		114.6	1	114.4		115.6 C		115.4 C
Region MS Totals	1149	1149	1149	1149	937	81.5	986		1249			111.5	1294	112.6		113.1		111.7	1 1	111.8	1	111.1				113.2
Columbia - West	5	3	1						-			1	1		-		_		_							
Milde Lake MC	900	200	200	200	5/4	113.4		117.6	5/3		576	113.8	542	107.1	268	112.3	543	108.5	549	108.5		109.3		109.7		111.7
Region MS Totals	_	1266		1266	1173		C 1243	98.2	1234	97.5	1281	101.2	1234	97.5	-	100.0		93.4		100.4	1377	107.8	1425	112.6	1453	116.8 C
;								1 1		1 1					Н				1-1		1 1		1 1	0.5	1 1	2
Northeastern Bonnie Branch MS	995	995	662	662	969	105.1	726	109.7	702	106.0	684	103.3	639	96.5		912	609	92.0	614	40 7		95.2	536	95.0		A 70
Elkridge Landing MS	77.9	779	779	779	691	88.7	684		744		752	96.5	750	96.3		98.1		99.4	795	102.1	662	102 6		104.6	833	106.8
Ellicott Mills MS	662	662	662	662	789		C 832	125.7	C 708		742	112.1	734	110.9		110.3		105.7		105.0		101.5	. 693	104 7		106.9
Mayfield Woods MS	798	798	798	798	712	89.2	748		111		840	105.3	880	110.3	931		953	119.4 C		126.6 C		130.8 C	1050	131.6 C		130.6 C
Thomas Viaduct MS	701	701	701	701	604	86.2	9/9		614		685	7.76	733	104.6		116.1 C	848	121.0 C				142.7 C	1072	152.9 C		159 9 C
Region MS Totals	3602	3602	3602	3602	3492	6.96	3666	101.8	3539	98.3	3703	102.8	3736	103.7	3843	106.7		107.8		112.1			4265	118.4 C		120.7 C
Northern																										
Burleigh Manor MS	77.9	779	779	779	812	104.2	837	107.4	852	109.4	863	110.8	869	1116		1167 C	643	120 3 C	200	1080	1050	126 G C	4000	440.0	1106	0 000
Dunloggin MS	A 565	565	565	662	644	114.0	649		709	125.5	C 712	107.6	1	108.5	729		735			110.7			730	118		
Patapsco MS	643	643	643	643	723	112.4	744	115.7	C 667		663	103.1		105.9		109.5	708	1101	602	1103	, , , , ,	1100	747	1115	+	113.7
Region MS Totals	1987	1987	1987	2084	2179	109.7	2230	112.2	2228		2238	107.4		108.8		112.0		115.0		117.0 C	1	120.2 C		122.3 C	2588	124.2 C
Southeastern																										
Hammond MS	69	604	604	604	603	99.8	281		999		903	8.66	662	109.6		110.8		114.7		117.4 C		125.0 C	762	126.2 C		128.6 C
Murray Hill MS	799	799	799	299	6/3	101.7	8	105.7	999		724	108.9	752	113.6	22	116.3 C	731	110.4	730	110.3	730	110.3	734	110.9	722	109.1
Patuxent Valley IMS	09/	-	09/	160	131	97.0	101		808	-	77.5	102.0	799	105.1	-	101.1		102.4		104.3		106.1		109.2		114.2
Region MS Totals	2026	2026	2026	2026	2013	99.4	1988	_	2042	100.8	2099	103.6	2213	109.2	2207	108.9		108.7		10.2		113.1	2326	114.8	2367	116.8 C
Western									-											ŀ						
Clarksville MS	643	643	643	643	909	94.2	999		549	85.4	563	97.8	564	87.7		86.2	548	85.2	552	85.8	572	0 68		8 06		918
Folly Quarter MS	99	662	662	299	604	91.2	633		629		679	102.6	929	102.1	. 685	103.5	673	101.7		103.6		107.7	710	107.3	688	103.9
Glenwood MS	545	545	545	545	561	102.9	561		533		929	102.6	878	106.1		108.3		102.6		104.0	100	104.6	-	109.4		108.6
Lime Kiln MS	70	101	701	701	728	103.9	717		702	1001	756	107.8	22	109.8		112.1		113.0		115.0		116.1 C		115 5 C		114.0
Mount View MS	798		798	798	757	94.9	677		877		899	112.7	900	112.8		112.3		114.3	933	116.9 C	982		1010			132 6 C
Region MS Totals	3349			-		97.2	3255	97.2	3290	-	3456	103.2	3488	104.2	3511	104.8	3484	104.0		105.8			3710			111.3
Countywide Totals	13086	13379	13379	13476	13050	2.66	13368		13582	2 101.5	14058	104.3	14233	105.6	14461	107.3	14509	107.7		110.2	١.,	113.1	-	115.4	15784	117 1
'A' includes additions as reflected in FY 2017 CIP for grades 6-8	flected in F	Y 2017	CIP for g.	rades 6-	00																				1	

Post Measures Chart Page 49 Middle Schools

Pre-Measures									CESE		Dal- C-	a loi De	BUOME	HIGH SCHOOLS - Data for Demonstrative Purposes Unly	urpose	Soniy									
Capacity Utilization Rates with Boar Chart reflects May 2015 Projections. Board of Education's FY 2016 approved capacities, and no redistricting.	15 Projection	is. Board	of Educa	Ition's FY	Ca / 2016 ap	Capacity Utili: 6 approved capa	ilization pacities,	Rates v	with Boar	rd of Ed	ucation	s Appro	ved FY	2016 C	apital Bu	Idget Pr	ojects -	Not Tes	ization Rates with Board of Education's Approved FY 2016 Capital Budget Projects - Not Test for APFO cities, and no redistricting.						
		Cal	Capacity		20	2016-17	20	2017-18	20	2018-19	20	2019-20	202	2020-21	202	2021-22	2022-23	1.23	2023-24	-	2024-25		2025-26	2	2026-27
Columbia - East Oakland Mills HS	2016 1400	2017	2018 1400	2019 1400	Proj 1153	% Util. 82.4	Proj 1132	% Util. 7 80.9	Proj 1114	% Util. 79.6	Proj 1170	% Util. 83.6	Proj 1164	% Util. 83.1	Proj 1219	% Util. 87.1	Proj 9	% Util. 7 91.2	Proj % Util. 1263 7 90.2		Proj % Util. 1274 91.0	I. Proj	j % Util. 5 91.8	Proj 1263	% Util.
Columbia - West Wilde Lake HS	1424	1 1424	1424	1424	1297	91.1	1352	1352 84.9	1399	1399 88.2	1445	1445 7101.5		1526 107.2 1531 107.5	1531	107.5	1554 7109.1	109.1	1549 7 108.8	15	1528 107.3		1547 7108.6		1534 7 107.7
Northeastern Howard HS Long Reach HS	1420	1420	1420	1420	1803	127.0	1885	1885 132.7 1756 118.0	1907	1907 134.3 1828 122.8	1977	1977 139.2 1939 130.3	2015	2015 141.9	2029 742.9	142.9	2036 743.4	143.4	2350 143.4		1999 740.8 2440 764.0		1991 <b>140.2</b> 2582 173.5		2013 141.8
New HS #13	NS 0	-		1-		1																			
Region HS Totals	2908	3 2908	2908	2908	3429	117.9	3641	3641 125.2	3735	128.4	3916	3916 134.7	4062 139.7	139.7	4139 142.3	142.3	4295 147.7	147.7	4386 150.8	-	4439 152.6	6 4573	3 157.3		4694 103.8
Northern Centennial HS	1360	1360	1360	1360	1480	108.8	1555	1555 714.3	1604	117.9	1633	120.1	1690	124.3	1722	126.6	1746	128.4	1779 7 130.8		1817 7 133.6		4 736.3		138.7
Marriotts Ridge HS Mt Hebron HS	1615	5 1615	1615	1615	1231	1231 76.2	1285	1285 79.6	1341	83.0	1366	1366 84.6	1420	1420 87.9 1765 126.1	1445	1445 89.5 1803 128.8	1828 130.6	130.6	1492 92.4		1487 92.1 1863 133.1		1513 93.7		1524 94.4
Region HS Totals	4375		10	4375	4310	98.5	4489	102.6	4643	106.1	4759	108.8	4875	111.4	4970	113.6	9929	115.5	5114 7116.9		г I		2 119.8	Н	120.9
Southeastern Hammond HS	1220		1220 1220	1220		1319 108.1	1387	1387 113.7	1420	1420 116.4	1512	123.9	1512 123.9 1550 127.0	127.0	1624	133.1	1624 133.1 1712 740.3	140.3	1726 141.5		1805 748.0	1831	1 150.1		1874 7153.6
Western Atholton HS	1360	0 1360	1360	1360	1439	105.8	1503	1503 7 110.5	1557	114.5	1563	114.9	1623	119.3		121.0	1674	123.1	1730 7127		100		6 7 130.6	1802	132.5
Glenelg HS	1420	1420	1420	1420	1221	1221 86.0	1211	85.3	1281	90.2	1268	1268 89.3	1277	89.9	1296	91.3	1290 90.8	90.8	1333 93.9		1356 95.5		1346 94.8	1346	94.8
River Hill HS	1488				1224	82.3	1252	84.1	1257	84.5	1243	83.5		84.5		83.3	1237	83.1	1265 85.		7		8 85.2		
Region HS Totals	5819		-	5819	5430	L I	5595		5860		5913	5913 7101.6	6052	104.0		104.7	6175	106.1	r 1		26 110.4		-4	1000	111.6
Countywide Totals	17146	6 17146	17146	17146	16938	8 86	17596	100 E	18171	106.0	18715	100 2	19229	1121	19574	114.2	20068	117.0	20373 118 8		20639 120 4	A 2005	C CC1 1	21151	7 412 7

Pre Measures Chart Page 50 High Schools

Aggregate Plans  Countries Plans  Countr	Post-Measures										HGE	SCHOOL	O-STC	ata for L	Demons	trative F	Jurnose	VINO S									
2019.20         2020.21         2020.21         2020.22         2020.23         2020.24         2020.25         1724         91.01         1287         91.2         126.3         90.2         1274         91.0         1285         91.8         1288         91.8         1288         15.28         107.3         15.94         108.8         15.28         107.3         15.94         108.8         15.28         107.3         15.94         108.8         15.28         107.3         15.24         108.8         15.28         107.3         15.24         108.8         15.28         107.3         15.24         108.8         15.28         107.3         15.24         108.8         15.28         107.3         15.24         108.8         15.28         107.3         15.24         108.8         15.28         107.3         108.8         15.28	Aggregate Plan								Capa	city Utiliz	ation Ra	ites with	Propose	ed FY 2	017 Car	vital Bud	get Proje	ects - Ne	of Test fo	or APEC							
2019.20         2020.21         2021.22         2022.23         2023.24         2024.25         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         2023.26         10.8         8 Usil.         Proj. % Usil.	Chart reflects May 2016	Projection	ns, Boar	d of Educ	cation's !	FY 2017	Requeste	d capaciti	es and es	imated re-	districting.						5										
ESST 2016 2017 2018 2019 2019 2019 1153 82.4 1132 80.9 1114 79.6 110.8 1.0 1 150 81.0 1 120 81.1 120 81.1 120 81.1 120 91.0 1 110.0			Cal	pacity		20	16-17	20	117-18	20.	18-19	8	9-20	202	20-21	202	1.22	202	2-23	202	3-24	202	4-25	202	25-26	20	126-27
West 1420 1400 1400 1153 82.4 1132 80.9 1114 73.6 1170 83.6 1164 83.1 1219 87.1 1277 91.2 1265 90.2 1274 91.0 1286 91.8 1265 91.9 1714 73.6 1170 83.6 1164 83.1 1219 87.1 1217 91.2 1265 90.2 1274 91.0 1286 91.8 1289 9	Columbia - East	2016	$\rightarrow$				% Util.	Proj	% Util.	Proj	% Util.		% Util.		% Util.	Proj %	4 Util.		6 Util.		% Util.		% Util.		% Util.	Proi	% Util.
Nest	Oakland Mills HS	1400	-			_	82.4	1132	_	1114	79.6	1170	83.6	1164	83.1	-	87.1	1277	91.2	1263	90.2	1274	91.0	1285	91.8	1263	90.2
1420   1424   1425	Columbia - West																										
HS H	Wilde Lake HS	1424				_	91.1	1352	94.9	1399	98.2	1445	101.5	1526	107.2		107.5		109.1	1549	108.8	1528	107.3	1547	108.6	1534	107.7
HS H	Northeastern																							Ì			
HS 1488 1488 1488 1488 1488 1488 1488 148	Howard HS	1420		1420	1420	1803	127.0	1885	132.7	1907	134.3	1977	139.2	2015	141 9		142 9	2036	143.4	2036	143.4	1000	140.8	1004	140.2	2042	444.0
National Street   1960   20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Long Reach HS					-	109.3	1756	118.0	1828	122.8	1939	130.3	2047	137.6		141.8	2259	151.8	2350	157.9	2440	164.0	2582	173.5	2681	180.2
S 1360 1360 1360 1360 1360 1360 1360 1360	New HS #13		0	0	0																						
S 1360 1360 1360 1360 1360 1480 108.8 1556 114.3 1604 117.9 1633 120.1 1630 124.3 1722 126.6 1746 128.4 1779 130.8 1817 133.6 1854 136.3 1806 124.3 1722 126.6 1746 128.4 1779 130.8 1817 133.6 1854 138.3 1806 124.3 1722 126.6 1746 128.4 1779 130.8 1817 133.6 1854 138.3 1806 124.3 1760 124.3 1722 126.6 1746 128.4 1779 130.8 1817 133.6 1854 138.7 1524 138.7 131.6 128.8 1778 130.6 124.3 1770 127.8 181.3 133.4 181.5 133.9 139.9 139.1 131.1 131.1 131.6 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.1 181.3 131.3 131.1 181.3 131.1 181.3 131.3	Region HS Totals	2908	Н		Н	_	117.9	3641	125.2	3735	128.4	3916	134.7	-	139.7	Н	142.3	+	147.7	4386	150.8	1	152.6	4573	157.3	4694	161.4
\$\text{S}\$   1360   1360   1360   1480   108.8   1555   114.3   1604   117.8   1633   120.1   1680   124.3   1722   126.6   1742   1487	Northern																					İ					
9e HS	Centennial HS	1360				1480	108.8	1555	114.3	1604	117.9	1633	120.1	1690	124.3		126.6	1746	128.4	1779	130 8	1817	133 6	1854	136 3	1886	138 7
S 1400 1400 1400 1599 114.2 1659 117.8 1698 121.3 1760 125.7 1756 126.1 1803 128.8 1805 130.6 1843 131.6 1863 133.1 1875 133.9 1800 1800 1400 1400 1400 1599 114.2 1659 114.8 1803 106.1 1804 1407 113.6 1805 113.6 1805 113.6 1805 113.7 1807 113.8 1809 110.8 12.8 12.8 12.8 12.8 12.8 12.8 12.8 12	Marriotts Ridge HS	1615				_	76.2	1285	79.6	1341	83.0	1366	84.6	1420	87.9		89.5	1481	217	1492	42.4	1487	42.1	1513	43.7	1524	04.4
Claims   4375   4375   4376   4375   4376   4375   4376   4375   4376   4375   4376   4375	Vit Hebron HS	1400				-	114.2	1649	117.8	1698	121.3	1760	125.7	1765	126.1		128.8	1828	130.6	1843	1316		133 1	1876	133 9	1880	134 3
S   1220   122	Region HS Totals	4375			-	Н	98.5	4489	102.6	4643	106.1	4759	108.8	4875	111.4	Н	113.6	5055	115.5	5114	116.9	Н	118.1	5242	119.8	5290	120.9
S 1220 1220 1220 1220 1220 1210 1220 122	Southeastern																										
1360 1360 1360 1439 105.8 1503 110.5 1567 114.5 1563 114.9 1623 119.3 1645 12.10 1674 123.1 1730 127.2 1751 128.8 1776 130.6 130.6 130.6 130.6 130.8 133 93.9 1356 95.5 1346 94.8 1746 1746 1746 1746 1746 1746 1746 1746	lammond HS	1220				_	108.1	1387	113.7	1420	116.4	1512	123.9	-	127.0		133.1		140.3		141.5		148.0	1831	150.1	1874	153.6
1360 1360 1360 1360 1439 105.8 1503 110.5 145.7 114.5 1563 114.9 1623 119.3 164.5 121.0 167.4 123.1 1730 127.2 1751 128.8 1776 130.6	Western																										
1420   1420   1420   1421   1420   1421   1422	Atholton HS	1360		1		1439	105.8	1503	110.5	1557	114.5	1563	114.9	1623	119.3	1645	1210	1674	123.1	1730	127.9	1751	128 B	1776	130 6	1802	430 E
1551 1551 1551 1554 1554 1554 1554 250 1554 1555 1555 1555 1555 1555 1555 15	Glenelg HS	1420				1221	86.0	1211	85.3	1281	90.2	1268	89.3	1277	89.9	1296	91.3	1290	8 06	1333	63.6	1356	95.5	1346	0.70	1346	8 76
1488 1488 1488 1488 1224 82.3 1252 84.1 1257 84.5 1243 83.5 1258 84.5 1240 83.3 1237 83.1 1265 85.0 1263 84.9 1270 82.3 1237 83.1 1285 85.0 1263 84.9 1270 82.3 1270 83.1 1285 85.0 1263 84.9 1280 82.2 1270 83.1 1285 85.0 1280 82.2 1270 83.1 1285 85.0 1280 82.2 1270 83.1 1280 85.0 1280 82.2 1270 83.1 1280 85.0 1280 82.2 1270 83.1 1280 85.0 1280 82.2 1270 83.1 1280 82.2 1280 8	Reservoir HS	1551				1546	99.7	1629		1765	113.8	1839	118.6	1894	122.1		123 1	1974	127.3	2007	129.4	2056	130 K	2086	134 6	2078	1340
5619 5819 5819 5819 5819 5819 5819 5819 58	River Hill HS	1486				_	82.3	1252		1257	84.5	1243	83.5	1258	84.5		83.3	1237	83.1	1265	85.0	1263	84.9	1268	85.2	1270	85.3
17146 16938 98.8 17596 102.6 18171 106.0 18715 109.2 19229 112.1 19574 114.2 20068 117.0 20373 118.8 20639 120.4 20954 122.2 21151	Region HS Totals	5815		5819			93.3	5695		5860	100.7	5913	101.6	6052	104.0		104.7	6175	106.1	6335	108.9	6426	110.4	6476	111.3	6496	111.6
	Countywide Totals	1714		3 17146			98.8	17596	-	18171	106.0	18715	109.2	19229	112.1		114.2		117.0	20373	118 8		120 4	20954	122 2	21151	123.4